FEBRUARY 29, 1964
Volume 11 Number 4

240.8
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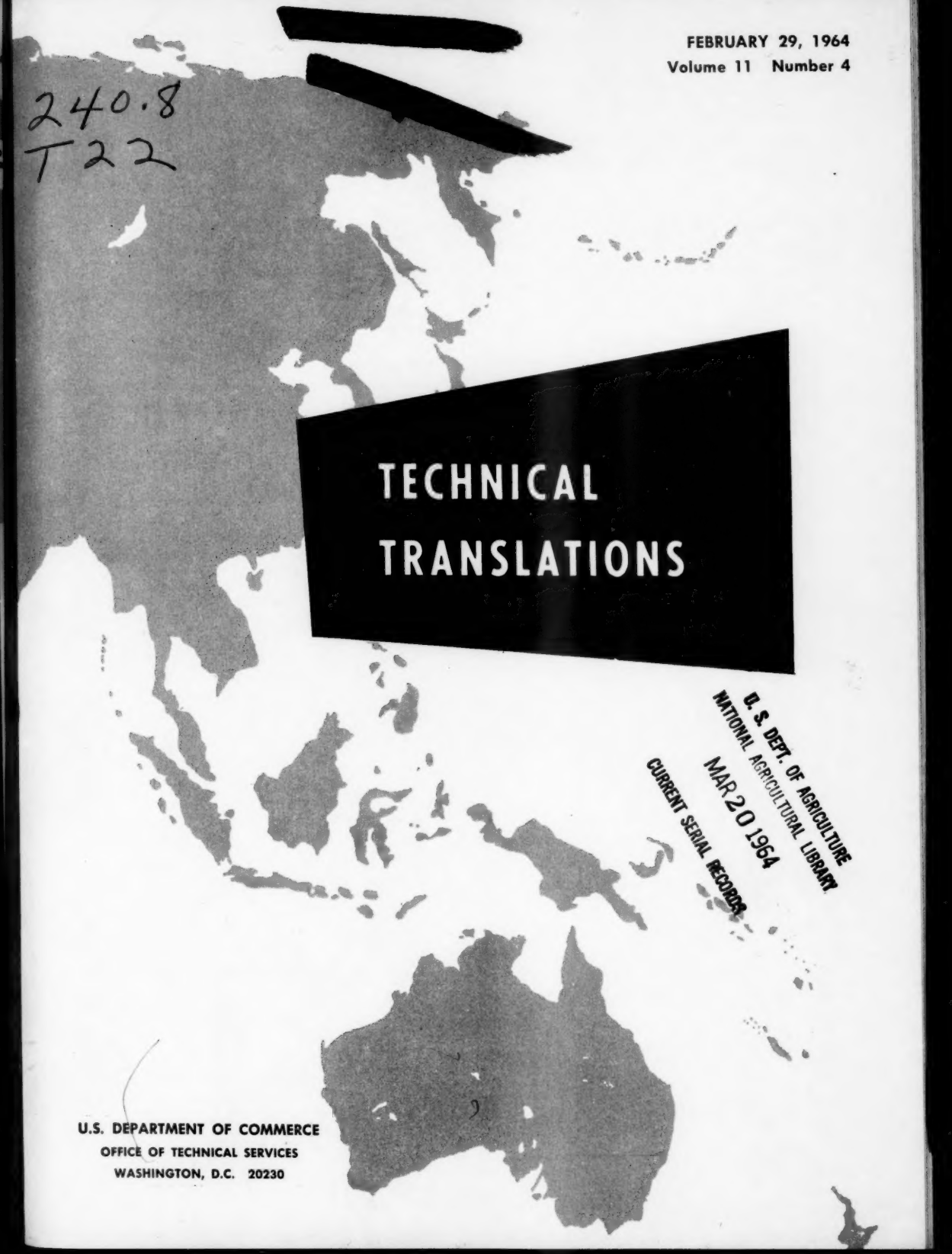

# TECHNICAL TRANSLATIONS

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# TECHNICAL TRANSLATIONS

**U.S. DEPARTMENT OF COMMERCE**
**Luther H. Hodges, *Secretary***

**OFFICE OF TECHNICAL SERVICES**
**Donald A. Schon, *Director***

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# CONTENTS


| | Page |
|---|---|
| HOW TO ORDER TRANSLATIONS | III |
| BIBLIOGRAPHY | 193 |
| AGRICULTURE | 193 |
| Animal Husbandry | 195 |
| Plant Cultivation | 195 |
| ASTRONOMY | 196 |
| Astrophysics | 196 |
| BEHAVIORAL SCIENCES | 196 |
| Personnel and Training | 196 |
| Psychology | 197 |
| BIOLOGICAL SCIENCES | 197 |
| Anatomy and Physiology | 199 |
| Biochemistry | 202 |
| Botany | 202 |
| Medical Specialties and Equipment | 203 |
| Microbiology | 204 |
| Neurology and Psychiatry | 204 |
| Pathology | 207 |
| Pharmacology and Toxicology | 212 |
| Radiobiology | 214 |
| Surgery | 215 |
| Zoology | 216 |
| CHEMISTRY | 218 |
| Analytical Chemistry | 218 |
| Inorganic Chemistry | 219 |
| Organic Chemistry | 220 |
| Physical Chemistry | 222 |
| EARTH SCIENCES | 227 |
| Climatology and Meteorology | 227 |
| Frost Science | 230 |
| Geodesy | 230 |
| Geology | 230 |
| Mineralogy | 234 |
| Oceanography | 234 |
| Physics of the Atmosphere | 235 |
| Seismology | 235 |
| ENGINEERING | 236 |
| Aeronautical Engineering | 237 |
| Chemical Engineering | 237 |
| Civil Engineering | 239 |
| Electrical and Electronic Engineering | 239 |
| Ordnance, Missiles, and Satellite Vehicles | 242 |
| Sanitation and Safety Engineering | 242 |
| FOOD, HANDLING, AND PACKAGING EQUIPMENT | 243 |
| MACHINERY, FABRICATION, AND ACCESSORY EQUIPMENT | 243 |
| Engines and Propulsion Systems | 246 |
| Manufacturing Equipment and Processes | 246 |
| Transport, Traction and Hoist Facilities | 247 |
| MATERIALS | 248 |
| Adhesives and Sealants | 249 |
| Ceramics and Refractories | 249 |
| Fuels, Lubricants, and Hydraulic Fluids | 250 |
| Leather and Textiles | 251 |
| Photographic Materials | 251 |
| Plastics | 252 |
| Rubber and Elastomers | 253 |
| Wood and Paper | 253 |
| MATHEMATICS | 254 |
| Computing Devices | 254 |
| MECHANICS | 255 |
| Aerodynamics and Pneumatics | 255 |
| METALLURGY | 255 |
| Ferrous Metals | 257 |
| Light Metals | 259 |
| Nonferrous (except light) Metals | 259 |

| | Page |
|---|---|
| METALLURGY (CON) | |
| Structural Metallurgy and Corrosion | 260 |
| NUCLEAR PHYSICS AND NUCLEAR CHEMISTRY | 260 |
| Instruments and Installations | 260 |
| Nuclear Engineering and Power | 260 |
| PHYSICS | 260 |
| Electronics | 261 |
| Molecular Physics and Spectroscopy | 262 |
| Optics | 263 |
| Solid State Physics | 263 |
| Wave Propagation | 264 |
| RESEARCH METHODS, TECHNIQUES AND EQUIPMENT | 265 |
| Photographic Equipment | 266 |
| SOCIAL SCIENCES | 267 |
| Documentation | 269 |
| BOOK REVIEWS (None in this issue) | |
| TRANSLATIONS IN PROCESS | B-7 |
| PERIODICALS TRANSLATED COVER-TO-COVER | C-97 |
| Tables of Contents | C-98 |
| AUTHOR INDEX | I-1 |
| JOURNAL INDEX | I-4 |
| NUMBER INDEX | I-10 |

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References to sources of original text are given as they appear on the translation, with sufficient editing to assure uniformity in citations.

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SYMBOLS FOR SOURCES OF TRANSLATIONS

AC
A. Capelo
P. O. Box 46354
Hollywood,
California 90046

AGI
AGI Translations Office
American Geological Institute
2101 ConstitutionAve., N. W.
Washington, D. C., 20000

AGS
American Geographical Society
Broadway at 156th Street
New York, New York 10032

AGU
American Geophysical Union
1515 Massachusetts Ave., N. W.
Washington, D. C. 20005

AIAA
American Institute of Aeronautics and Astronautics
500 Fifth Avenue
New York, New York 10036

AIBS
American Institute of Biological Sciences
2000 P Street, N. W.
Washington, D. C. 20006

AIP
American Institute of Physics
335 East 45th Street
New York, New York 10017

AIS
Argus Information Service
624 N. Eutaw Street
Baltimore, Maryland 21201

AM
Acta Metallurgica
122 East 55th Street
New York, New York 10022

ANSP
Academy of Natural Sciences of Philadelphia
19th St. and the Parkway
Philadelphia, Pennsylvania 19103

API
Academic Press, Inc.
111 Fifth Ave.,
New York, New York 10003

ARS
American Rocket Society, Inc.
20th and Northampton Streets
Easton, Pennsylvania 18042

ATS
Associated Technical Services, Inc.
P. O. Box 271
East Orange, New Jersey 07017

BGIRA
British Glass Industry Research Association
Northumberland Road
Sheffield 10, England

BIHR
Circulation Manager
Translations of the Beltone Institute for Hearing Research
2900 West 36th Street
Chicago, Illinois 60632

BISI
British Iron & Steel Industry Translation Service
The Iron and Steel Institute
4, Grosvenor Gardens
London, S. W. 1, England

BWRA
British Welding Research Association
Abington Hall, Abington
Cambridge, England

CB
Consultants Bureau Enterprises Inc.
227 West 17th Street
New York, New York 10011

CCT
Consultants Custom Translations Inc.
227 West 17th Street
New York, New York 10011

CHP
Cleaver-Hume Press, Ltd.
31, Wright's Lane
London, W. 8, England

CID
Centro de Informacion y Documentacion
Patronato Juan de la Cierva,
Serrano 150, Apartado 743,
Madrid 6, Spain

CIDNT
Centralny Instytut Dokumentacji Naukowo-Technicznej
Warszawa 12
Aleja Niepodleglosci 188
Poland

CNP
Comitato Nazionale per la Produttivita
Service d'Information
Viale Regina Margherita N. 83D
Rome, Italy

CNRS
Centre National de la Recherche Scientifique
Centre de Documentation
15 Quai Anatole France
Paris 7, France

CSIRO
Commonwealth Scientific and Industrial Research Organization
Information Service
314 Albert Street
East Melbourne C. 2, Victoria
Australia

CTRA
The Librarian
The Coal Tar Research Association
Oxford Road
Gomersal, Leeds, England

CTS (Chem)
Chemical Translating Service
2243 Greer Road
Palo Alto, California 94300

CTT
Columbia Technical Translations
5 Vermont Avenue
White Plains, New York 10600

DI
Circulation Unit
Department of the Interior
Central Library
Room 1149
Washington, D.C. 20240

DTC
Danish Translations Centre,
c/o Library of the Danish Atomic Energy Commission,
Riso. Roskilde, Denmark

EIS
Engineering Information Services
Kirkham, Preston, Lancashire,
England

ES
Erica Stux
584 Moreley Avenue
Akron, Ohio 44320

ETC
European Translations Centre
Doelenstraat 101, Delft,
The Netherlands

FASEB
Federation of American Societies for Experimental Biology
9650 Wisconsin Avenue
Washington, D.C. 20014

FRI
Fulmer Research Institute, Ltd.
Stoke Poges,
Buckinghamshire,
England

FT
Faraday Translations
15 Park Row
New York, New York 10038

GB
Gordon and Breach
Publishers, Inc.
150 Fifth Avenue
New York, New York 10011

GPO
Superintendent of Documents
Government Printing Office
Washington, D.C. 20402

GPRC
Geophysical & Polar Research Center
6021 S. Highland Road
Madison, Wisconsin 53706

HB
Henry Brutcher
P.O. Box 157
Altadena, California 91001

HMSO
Her Majesty's Stationery Office
P.O. Box 569
London, S.E. 1, England

HTCBN
Hungarian Trading Company for Books and Newspapers "Kultura"
Budapest 62, P.O. Box 149

ICE
International Chemical Engineering
345 East 47th Street
New York, New York 10017

IEEE
Institute of Electrical & Electronics Engineers
275 Madison Avenue
New York, New York 10016

INFOSERV
Infoserv
P.O. Box 217
West Hartford, Connecticut 06097

INT
International Patent Service N. V.
P. O. Box 101
's-Hertogenbosch,
The Netherlands

IP
Interscience Publishers, Inc.
250 Fifth Avenue
New York, New York 10001

IPST
Israel Program for Scientific Translation
14 Shammai Street
P.O. Box 7145
Jerusalem, Israel

ISA
Instrument Society of America
530 William Penn Place
Pittsburgh, Pennsylvania 15219

K-H
Kresge-Hooker Science Library Associates
Wayne State University
Detroit, Michigan 48202

LAND-AIR
Land-Air, Inc.
Pacific Missile Range
Point Mugu, California 95468

LC
Photoduplication Service
Publication Board Project
Library of Congress
Washington, D.C. 20540

LSA
Literature Service Associates
Route 1
Bound Brook, New Jersey 08805

MACL
Maclaren and Sons, Ltd.
Maclaren House
131 Great Suffolk Street
London, S.E. 1, England

MACM
Macmillan Co.
60 Fifth Avenue
New York, New York 10011

MDF
Morris D. Friedman
7553 Waterford Drive
San Jose, California 95129

MT
M. de O. Tollemache
Pennyford Cottage,
Burrington,
Umberleigh, Devon, England

MUL
Mulholland Engineering Translations
26 Burton Woods Lane
Cincinnati, Ohio 45229

NASA
National Aeronautics and Space Administration
1520 H Street, N. W.
Washington, D. C. 20546

NRCC
National Research Council
Library
Ottawa 2, Canada

OB
Oliver & Boyd, Ltd.
Tweeddale Court
14 High Street
Edinburgh 1, Scotland

OSA
Optical Society of America, Inc.
33 University Road
Cambridge, Massachusetts 02138

OTS
Office of Technical Services
Department of Commerce
Washington, D. C. 20230
(Also available through Department of Commerce Field Offices)

PERA
The Information Manager
Production Engineering Research Association
Melton Mowbray
Leicestershire, England

PLP
Plenum Press, Inc.
227 West 17th Street
New York, New York 10011

PP
Pergamon Press
122 East 55th Street
New York, New York 10022

PS
Primary Sources
11 Bleecker Street
New York, New York 10012

RIA
Research International Associates
1522 Connecticut Avenue, N. W.
Washington, D. C. 20006

RIS
Research Information Service
Div. of Pergamon International Corp.
122 East 55th Street
New York, New York 10022

SA
Seizaburo Aoki
1069 Minami Nakadori 2-chome
Fujisawa, Japan

SIC
Scientific Information Consultants Limited
661 Finchley Road
London N. W. 2, England

SLA
SLA Translations Center
The John Crerar Library
35 West 33rd Street
Chicago, Illinois 60616

ST
Scripta Technica, Inc.
1000 Vermont Avenue, N. W.
Washington, D. C. 20005

STS
Scientific Translation Service
1938 Verdugo Knolls Drive
Glendale, California 91200

STT
SCIENTECH, Scientific & Technical Translations
P. O. Box 3530
Cleveland, Ohio 44118

TF
Taylor and Francis Ltd.
Red Lion Court, Fleet Street
London, E. C. 4, England

TDL
Mr. John Wiley
Technical Development Laboratories
P. O. Box 769
Savannah, Georgia 31400

TIB
Technische Informationsbibliothek
Am Welfengarten 1,
Hannover, West Germany

TIC
Technical Information Company
Patents Department
Chancery House
Chancery Lane
London, W. C. 2, England

TTIS
Translation & Technical Information Services
32 Manaton Road
London, S. E. 15, England

WBI
Warren Birkenhead, Inc.
901 Northern Life Tower
Seattle, Washington 98101
or
No. 25, 2-Chome, Shiba Hamamatsu-Cho
Minato-Ku, Tokyo, Japan

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University Park, Pennsylvania 16801

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Volume 11, Number 4 Pages 193 - 270 February 29, 1964

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Order from OTS $0.75 TT-63-41143

Consists of abstracts of articles from selected scientific and technical journals of Rumania.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 354. (GENERAL SERIES). 20 Nov 63, 19p JPRS: 21938.
Order from OTS $0.75 TT-63-41176

Abstract trans. of Nauka Polska, 1963, v. 11, no. 4, p. 57-99, 101-186.

Library of Congress, Washington, D. C.
MONTHLY INDEX OF RUSSIAN ACCESSIONS.
Order from GPO $12.00/year

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## AGRICULTURE

THE DEVELOPMENT OF AGRICULTURAL SCIENCE IN CHINA. 21 Nov 63, 3p JPRS: 21977.
Order from OTS $0.50 in TT-63-41192 (p. 13-15)

Trans. of Chung Kuo Hsin Wen (Chinese People's Republic) 1963, 16 Sep, p. 4-5.

HAN NATIONALITY SCIENTIFIC PERSONNEL PARTICIPATE IN CONSTRUCTION OF SINKIANG. 30 Oct 63, 4p JPRS: 21661.
Order from OTS $1.00 in TT-63-41035 (p. 21-24)

Trans. from Jen Min Jih Pao (Chinese People's Republic) 1963, 8 Sep, p. 2.

JOURNAL FOR SCIENTIFIC AGRICULTURE RESEARCH, 1962, VOL. 15, NO. 49.
Bozidar Filipovic, tr. 1963, 135p 140refs PL-480 Agr.
Order from OTS $1.25 TT-62-11755/3

Trans. of Arhiv za Poljoprivredne Nauke [i Tehniku] (Yugoslavia) 1962, v. 15, no. 49.

Separate entries have been prepared for the individual papers included in this issue.

NON-CAKING POTASSIUM FERTILIZER. 16 Dec 63, 1p JPRS: 22299.
Order from OTS $2.25 in TT-64-21029 (p. 6)

Trans. from Komsomol'skaya Pravda (USSR) 1963, 5 Oct, p. 4. (Abstract available)

SALINITY AND ALKALINITY CONTROL MEASURES FRUITFULLY IMPLEMENTED IN HONAN. 21 Nov 63, 3p JPRS: 21977.
Order from OTS $0.50 in TT-63-41192 (p. 1-3)

Trans. from Kunag Ming Jih Pao (Chinese People's Republic) 1963, 8 Oct, p. 1.

USSR INDUSTRIAL DEVELOPMENT: SOVIET TRACTORS AND AGRICULTURAL MACHINERY NO. 101. 10 Dec 63, 25p JPRS-22206.
Order from OTS $0.75 TT-63-41325

Trans. of Ekonomika Sel'skogo Khozyaistva (USSR) 1963 [v. 34] no. 9, p. 11-19, 56-68.
Separate entries have been prepared for the individual article.

Aldoshin, I.
USE OF POWERFUL TRACTORS IN TSELINNYI KRAI. 10 Dec 63, 4p JPRS: 22206.
Order from OTS $0.75 in TT-63-41325 (p. 22-25)

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Balzer, L., Caleta, Z., and Pozezanac, T.
THE CONTENT OF BIOGENIC TRACE ELEMENTS IN THE GRASSES OF LONJSKO POLJE. 1963 8p 23refs PL-480 Agr.
Order from OTS $1.25 in TT-62-11755/3 (p. 115-122)

Trans. of Arhiv za Poljoprivredne Nauke [i Tehniku] (Yugoslavia) 1962, v. 15, no. 49, p. 117-124. (Abstract available)

Brand, W.
SYSTEMATIC STUDY OF SOIL STRENGTHENING AND THE TECHNOLOGY OF SOIL STABILIZATION WITH LIME. Jul 61
Order from C. L. A. I. R. A. Laboratories, Church Street, Welwyn, Herts, England £4 CLAIRA T. 17

Trans. of mono. die Verfahren der Bodenverfestigung für das Strassenwesen, Cologne, 1960, p. 99-120.

Ch'eng, Chao-hsien.
THE PAST AND PRESENT OF HIGH AGRICULTURAL EDUCATION IN CHINA. 13 Nov 63, 8p JPRS: 21834.
Order from OTS $2.00 in TT-63-41125 (p. 19-26)

Trans. from Chung Kuo Hsin Wen (Chinese People's Republic) 1963, 2 Oct, p. 8-9.

Estrina, A.
RSFSR FARM EQUIPMENT PROBLEMS. USSR Industrial Development: Soviet Tractors and Agricultural Machinery no. 98. 20 Nov 63, 8p JPRS: 21940.
Order from OTS $0.50 TT-63-41177

Trans. of #Voprosy Ekonomiki (USSR) 1963, no. 9, p. 96-102.

Ezhevskii, A.
FUNCTIONS OF SOYUZSEL'KHOZTEKHNIKA AND ITS SUBORDINATE BRANCHES. 10 Dec 63, 10p JPRS: 22206.
Order from OTS $0.75 in TT-63-41325 (p. 1-10)

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Kogan, E.
LONG-RANGE PLANNING TECHNICAL CHARTS. 10 Dec 63, 11p JPRS: 22206.
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Trans. of Ekonomika Sel'skogo Khozaistva (USSR) 1963 [v. 34] no. 9, p. 56-64.

Korica, B.
PASTURE VEGETATION ON THE VISOCICA IN HERCEGOVINA. 1963, 14p 25refs PL-480 Agr.
Order from OTS in TT-62-11755/3 (p. 81-94)

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Mikhlin, E. D.
BIOLOGICALLY ACTIVE SUBSTANCES IN ANIMAL HUSBANDRY (JOINT SESSION OF THE ACADEMY OF SCIENCES USSR, ALL-UNION ACADEMY OF AGRICULTURAL SCIENCES, AND MINISTRY OF AGRICULTURE USSR). 18 Dec 63, 7p JPRS: 22339.
Order from OTS $1.25 in TT-64-21050 (p. 26-32)

Trans. of Akademiya Nauk SSSR. Vestnik, 1963 [v. 33] no. 10, p. 109-113.

Ocokoljic, S. and Colic, D.
INVESTIGATIONS OF THE AGRICULTURAL VALUE OF THE MEADOWS IN SJENICKO POLJE. 1963, 20p 8refs PL-480 Agr.
Order from OTS $1.25 in TT-62-11755/3 (p. 61-80)

Trans. of Arhiv za Poljoprivredne Nauke [i Tehniku] (Yugoslavia) 1962, v. 15, no. 49, p. 60-80.

Raucourt, A.
RECENT DISCOVERY OF A NEW INSECTICIDE, HEXACHLOROCYCLOHEXANE (Découverte Récente d'un Nouvel Insecticide, l'Hexachlorocyclohexane). [1963] [8p] (foreign text included) 1ref
Order from SLA $1.10 TT-63-20178

Trans. of la Nature, Paris (France) 1945 [v. 73] no. 3093, p. 235-236.

## Animal Husbandry

Bacvanski, S., Cobic, T. M., Maslovaric, B., Kosanovic, M., and Vucetic, S.
THE EFFECT OF TETHERING (VERSUS LOOSE HOUSING) OF YOUNG FATTENING STOCK ON LIVE WEIGHT GAIN AND FOOD CONVERSION WITH CASTRATION AND HYDROXIZINE ARE USED. 1963, 12p 19refs PL-480 Agr.
Order from OTS $1.25 in TT-62-11755/3 (p. 17-28)

Trans. of Arhiv za Poljoprivredne Nauke [i Tehniku] (Yugoslavia) 1962, v. 15, no. 49, p. 15-27. (Abstract available)

Borisovich, Yu. F.
ACTIVE IMMUNIZATION OF SHEEP AGAINST POX (Aktivnaya Immunizatsiya Ovets Protiv Ospy).
24 Sep 63, 3p Trans. V-1856.
Order from OTS, SLA or ETC $1.10 TT-63-24009

Trans. of Veterinariya (USSR) 1963, v. 40, no. 2, p. 28-30.

Ch'eng, Shao-chiung.
REJOICE IN THE ACCOMPLISHMENTS OF CHINA'S VETERINARY SCIENCE. 21 Nov 63, 4p JPRS: 21977.
Order from OTS $0.50 in TT-63-41192 (p. 9-12)

Trans. of Chung Kuo Hsin Wen (Chinese People's Republic) 1963, 19 Sep, p. 11.

The elimination of rinderpest in China.

Goncharov, P. I., Lesnykh, V. I., and Grigor'eva, V. S.
CHEMICAL COLOR REACTION FOR DIAGNOSIS OF HOG CHOLERA (Tsvetnaya Khimicheskaya Reaktsiya dlya Diagnostiki Chumy Svinei). 24 Sep 63, 2p Trans. V-1857.
Order from OTS, SLA or ETC $1.10 TT-63-24010

Trans. of Veterinariya (USSR) 1963, v. 40, no. 2, p. 73-74. (Abstract available)

Grigor'ev, P. M.
THE EFFECT OF NIGHT FEEDING ON EGG PRODUCTION IN HENS (Vliyanie Nochnogo Kormleniya na Yaitsenoskost'Kur). 1963, 3p PL-480 Agr.
Order from OTS $0.50 TT-63-11047

Trans. of Sel'skoe Khozyaistvo Povolzh'ya (USSR) 1958, v. 3, no. 8, p. 64-65.

## Plant Cultivation

Kolesnikov, E. V.
METHODS OF INVESTIGATING THE GROWTH OF ABSORBING ROOTS IN FRUIT TREES (Metody Izucheniya Rosta Vsasyvayushchikh Kornei u Plodovykh Derev'ev). 1963, 10p 10refs PL-480 Agr.
Order from OTS $0.50 TT-63-11017

Trans. of Moskovskaya Sel'skokhozyaistvennaya Akademiya. Izvestiya (USSR) 1957, no. 6(19) p. 51-60. (Abstract available)

Kurakina, L. I.
EFFECT OF FERTILIZERS ON THE GROWTH AND DEVELOPMENT OF LARCH SEEDLINGS (Vliyanie Udobrenii na Rost i Razvitie Seyantsev Listvennitsy). 1963, 5p 4refs PL-480 Agr.
Order from OTS $0.50 TT-63-11188

Trans. of Botanicheskii Zhurnal (USSR) 1957, v. 42, no. 1, p. 68-72. (Abstract available)

Ma, T'ai-ho.
FOREST SOIL AND FOREST DEVELOPMENT.
11 Dec 63, 12p JPRS: 22237.
Order from OTS $1.25 in TT-63-41345 (p. 29-40)

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Trans. of selected abstracts from Referativnyi Zhurnal. [Otdel'nyi Vypusk 39]: Dvigateli Vnutrennego Sgoraniya (USSR) 1963, no. 5; Referativnyi Zhurnal. [Otdel'nyi Vypusk 43]: Gornoe, Stroitel'noe i Dorozhnoe Mashinostroenie (USSR) 1963, no. 7; Referativnyi Zhurnal. [Otdel'nyi Vypusk 40]: Tochnaya Mekhanika, Optika i Ispytatel'naya Apparatura (USSR) 1963, nos. 1, 7; Referativnyi Zhurnal. Otdel'nyi Vypusk 44]: Traktory i Sel'skokhozyaistvennye Mashiny (USSR) 1963, no. 7.

CONSTRUCTION EQUIPMENT DISPLAYED AT SOVIET EXHIBIT. 22 Nov 63, 22p JPRS: 22023.
Order from OTS $1.00 in TT-63-41229 (p. 1-22)

Trans. of Stroitel' (USSR) 1963 [v. 9] no. 9, p. 16-17, 27-31. (Abstract available)

THE COUNTRY NEEDS MORE MACHINE-TOOL OPERATORS. 21 Nov 63, 3p JPRS: 21981.
Order from OTS $0.50 in TT-63-41196 (p. 5-7)

Trans. from Pravda, Moscow (USSR) 1963, 10 Sep, p. 1.

MACHINE FOR MAKING PULP RAW MATERIAL: [RUSSIAN] AUTHOR'S CERTIFICATE 151,012.
7 Nov 63, 1p JPRS: 21768.
Order from OTS $0.75 in TT-63-41085 (p. 18)

Trans. from Ekonomicheskaya Gazeta (USSR) 1963, no. 36[109].

NEW EQUIPMENT FOR THE MACHINE BUILDING INDUSTRY. 6 Nov 63, 2p JPRS: 21743.
Order from OTS $0.75 in TT-63-41070 (p. 4-5)

Trans. from Sovetskaya Kirgiziya (USSR) 1963, 14 Sep, p. 2.

NEW INVENTION SPEEDS FINISHING OF WATCH PARTS. 17 Dec 63, 2p JPRS: 22326 (p. 1-2).
Order from OTS $2.25 in TT-64-21042 (p. 1-2)

Trans. from Ekonomicheskaya Gazeta (USSR) 1963 [no. 36(109)] p. 35.

NEW PP-600-1 FUSING AND SPINNING MACHINE. 6 Nov 63, 2p JPRS: 21743.
Order from OTS $0.75 in TT-63-41070 (p. 22-23)

Trans. from Pravda, Leningrad (USSR) 1963, 3 Sep, p. 1.

ORSHA SEWING MACHINE TAKEN OFF THE MARKET BECAUSE OF POOR QUALITY. 6 Nov 63, 2p JPRS: 21743.
Order from OTS $0.75 in TT-63-41070 (p. 9-10)

Trans. from Sovetskaya Belorussiya (USSR) 1963, 30 Aug, p. 1.

SIMFEROPOL' MACHINEBUILDING PLANT. 22 Nov 63, 2p JPRS: 22023.
Order from OTS $1.00 in TT-63-41229 (p. 23-24)

Trans. from Rabochaya Gazeta (USSR) 1963, 12 Sep, p. 2.

USSR INDUSTRIAL DEVELOPMENT: GENERAL INFORMATION ON SOVIET MACHINERY INDUSTRIES NO. 3. 6 Nov 63, 27p JPRS: 21743.
Order from OTS $0.75 TT-63-41070

Consists of 21 articles from 1963 issues of Russian journals and newspapers. Separate entries have been prepared for 6 articles.

USSR INDUSTRIAL DEVELOPMENT: GENERAL INFORMATION ON SOVIET MACHINERY INDUSTRIES NO. 4. 7 Nov 63, 21p JPRS: 21768.
Order from OTS $0.75 TT-63-41085

Consists of 4 articles from 1963 issues of Russian newspapers. Separate entries have been prepared for 2 articles.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CONSTRUCTION MACHINERY NO. 43. 22 Nov 63, 38p JPRS: 22023.
Order from OTS $1.00 TT-63-41229

Consists of 10 articles from 1963 issues of Russian journals and newspapers.
Separate entries have been prepared for 4 articles.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CONSTRUCTION MACHINERY NO. 44. 27 Nov 63, 19p JPRS: 22057.
Order from OTS $0.75 TT-63-41245

Trans. of Za Rulem (USSR) 1963 [v. 21] no. 6, p. 10-11; Lesnaya Promyshlennost' (USSR) 1963 [v. 41] no. 8, p. 11; from Ekonomicheskaya Gazeta (USSR) 1963, no. 40(113) p. 10-11; Sovetskaya Estoniya (Estonian SSR) 1963, 3 Oct, p. 2.

Separate entries have been prepared for the individual articles.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CONSTRUCTION MACHINERY NO. 45. 6 Dec 63, 27p JPRS: 22176.
Order from OTS $0.75 TT-63-41310

Consists of 14 articles from 1963 issues of Russian journals and newspapers.
Separate entries have been prepared for 2 articles.
(Abstract available)

USSR INDUSTRIAL DEVELOPMENT: SOVIET METALWORKING EQUIPMENT NO. 76. 12 Nov 63, 22p JPRS: 21821.
Order from OTS $0.75 TT-63-41115

Trans. of Mashinostroenie (USSR) 1963, no. 4, p. 18-19, 22-23, 25-31, 33, 39.

Separate entries have been prepared for the individual articles.

USSR INDUSTRIAL DEVELOPMENT: SOVIET METALWORKING EQUIPMENT NO. 78. 21 Nov 63, 12p JPRS: 21981.
Order from OTS $0.50 TT-63-41196

Trans. from Izvestiya (USSR) 1963, 6 Sep, p. 1; Pravda, Moscow (USSR) 1963, 10 Sep, p. 1; Pravda, Leningrad (USSR) 1963, 17 Sep, p. 2.
Separate entries have been prepared for the individual articles.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 126. 17 Dec 63, 84p JPRS: 22326.
Order from OTS $2.25 TT-64-21042

Trans. of 47 selected articles from Aug-Sep 63 issues of various Russian publications.
Separate entries have been prepared for 7 articles.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 127. 19 Dec 63, 35p JPRS: 22372.
Order from OTS $1.00 TT-64-21066

Trans. of 10 selected articles from Sep-Oct 63 issues of Russian journals and newspapers.
Separate entries have been prepared for 4 articles.

Artemov, I.
LOW RATE OF EQUIPMENT UTILIZATION IN THE MACHINE BUILDING INDUSTRY. 6 Nov 63, 3p JPRS: 21743.
Order from OTS $0.75 in TT-63-41070 (p. 6-8)

Trans. from Sovetskaya Kirgiziya (USSR) 1963, 29 Aug, p. 3.

Bogoyavlenskii, V. N. and Bykov, A. P.
DIESEL ELECTRO-MECHANICAL TRANSMISSION FOR A.C. [1963] [4p]
Order from OTS, SLA, or ETC $1.10 TT-63-20380

Trans. of Zheleznodorozhnyi Transport (USSR) 1963 [v. 45, no. 3] p. 31-33. (Abstract available)

Bruevich, N. G. and Grabovetskii, V.
BASIC DIRECTIONS IN RELIABILITY THEORY. 19 Nov 63, 11p 19refs JPRS: 21923. N64-10353
Order from OTS $0.50 TT-63-41169

Trans. of #Priborostroenie (USSR) 1963, no. 8, p. 3-6.

Chepul'skii, V. G.
AN ATTACHMENT FOR BENCH WORK ON PUMP ROTORS. 12 Nov 63, 2p JPRS: 21821.
Order from OTS $0.75 in TT-63-41115 (p. 20-21)

Trans. from Mashinostroenie (USSR) 1963, no. 4, p. 33 (Abstract available)

Fedorov, V. P.
UNIT-TYPE MACHINE-TOOL FOR MACHINING CASINGS AND LIDS FOR RELAY APPARATUSES. 12 Nov 63, 2p JPRS: 21821.
Order from OTS $0.75 in TT-63-41115 (p. 16-17)

Trans. of Mashinostroenie (USSR) 1963, no. 4, p. 29-30.

Technical characteristics are given.

Gal'kevich, L., Romanv, S., and Kogan, L.
POOR PLANNING FOR CONSTRUCTION MACHINERY. 27 Nov 63, 5p JPRS: 22057.
Order from OTS $0.75 in TT-63-41245 (p. 7-11)

Trans. from Ekonomicheskaya Gazeta (USSR) 1963, no. 40(113) p. 11.

Gol'dberg, A. M.
STANDARDIZING ENGINES FOR THE LUMBERING INDUSTRY. 27 Nov 63, 3p JPRS: 22057.
Order from OTS $0.75 in TT-63-41245 (p. 17-19)

Trans. of Lesnaya Promyshlennost' (USSR) 1963 [v. 41] no. 8, p. 11.

Gulida, E. N. and Varman, T. V.
MULTI-POSITION SEMI-AUTOMATIC LATHE FOR MACHINING LARGE ARTICLES. 12 Nov 63, 3p JPRS: 21821.
Order from OTS $0.75 in TT-63-41115 (p. 4-6)

Trans. of Mashinostroenie (USSR) 1963, no. 4, p. 22-23. (Abstract available)

Lizunov, E. A.
NOVOROSSIISKII MACHINEBUILDING PLANT. 22 Nov 63, 1p JPRS: 22023.
Order from OTS $1.00 in TT-63-41229 (p. 26)

Trans. of Tsement (USSR) 1963 [v. 29] no. 4, p. 19-20.

Malkiman, I. E.
MULTIPLE-OPERATION COMBINED DIES. 12 Nov 63, 1p JPRS: 21821.
Order from OTS $0.75 in TT-63-41115 (p. 22)

Trans. from Mashinostroenie (USSR) 1963, no. 4, p. 39. (Abstract available)

Mamont, M. S., Segal, B. M., and Otchenash, E. M.
GROUP READJUSTABLE DEVICES FOR MACHINING ARTICLES OF COMPLICATED SHAPES, MADE OF STAINLESS STEEL. 12 Nov 63, 2p JPRS: 21821.
Order from OTS $0.75 in TT-63-41115 (p. 11-12)

Trans. from Mashinostroenie (USSR) 1963, no. 4, p. 27,

Naish, M. N. and Varman, T. V.
USE OF SPECIAL MACHINE TOOLS FOR GROUP MACHINING. 12 Nov 63, 3p JPRS: 21821.
Order from OTS $0.75 in TT-63-41115 (p. 13-15)

Trans. of Mashinostroenie (USSR) 1963, no. 4, p. 28-29. (Abstract available)

Orlov, V. B.
SELF-PROPELLED UNIT FOR HYDROGEOLOGICAL DRILLING. 6 Dec 63, 4p JPRS: 22176.
Order from OTS $0.75 in TT-63-41310 (p. 1-4)

Trans. of [Neftyanoe Oborudovanie i Mashiny] (USSR) 1963 [v. 1] no. 4, p. 3-4.

Omel'yanenko, T.
NEW CONSTRUCTION MACHINERY. 22 Nov 63, 1p JPRS: 22023.
Order from OTS $1.00 in TT-63-41229 (p. 25)

Trans. from Izvestiya (USSR) 1963, 16 Sep, p. 3.

Plakhtii, A.
NON-PAYMENT FOR CONSTRUCTION MACHINERY. 27 Nov 63, 3p JPRS: 22057.
Order from OTS $0.75 in TT-63-41245 (p. 1-3)

Trans. from Ekonomicheskaya Gazeta (USSR) 1963, no. 40(113) p. 10.

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DEVELOPMENTS AT THE MOGILEV TRACTOR PLANT. 27 Nov 63, 5p JPRS: 22057.
Order from OTS $0.75 in TT-63-41245 (p. 12-16)

Trans. of Za Rulem (USSR) 1963 [v. 21] no. 6, p. 10-11. (Abstract available)

Ruzanov, V.
AUTOMATIC WELDING AT THE TALLIN EXCAVATOR PLANT. 27 Nov 63, 3p JPRS: 22057.
Order from OTS $0.75 in TT-63-41245 (p. 4-6)

Trans. from Sovetskaya Estoniya (Estonian SSR) 1963 3 Oct, p. 2.

Sementsov, V.
AFTEREFFECTS OF UNIFICATION OF MACHINE-TOOL BUILDING ENTERPRISES. 21 Nov 63, 5p JPRS: 21981.
Order from OTS $0.50 in TT-63-41196 (p. 8-12)

Trans. from Pravda, Leningrad (USSR) 1963, 17 Sep, p. 2.

Severilov, V. S. and Gurenko, S. I.
MANUFACTURE AND OPERATION OF LARGE-MODULE WELDED WORM AND DISK MILLING CUTTERS. 12 Nov 63, 3p JPRS: 21821.
Order from OTS $0.75 in TT-63-41115 (p. 1-3)

Trans. of Mashinostroenie (USSR) 1963, no. 4, p. 18-19.

Shelepenkov, B. and Vtyurin, N.
NEW PRESS FOR BRIQUETING METAL CHIPS. WHY IS THIS IMPORTANT INVENTION NOT SUPPORTED? WE QUESTION THE SECRETARY OF THE GOR'KII INDUSTRIAL OBKOM CPSU COMR. M. EFREMOV AND PRESIDENT OF THE VOLGO-VYATSKII SOVNARKHOZ COMRADE V. SUKHOV. 21 Nov 63, 4p JPRS: 21981.
Order from OTS $0.50 in TT-63-41196 (p. 1-4)

Trans. from Izvestiya (USSR) 1963, 6 Sep, p. 1.

Takhistov, V. P. and Fel'dman, L. E.
UNIVERSAL JIG FOR DRILLING HOLES IN ARTICLES OF THE FLANGE TYPE. 12 Nov 63, 2p JPRS: 21821.
Order from OTS $0.75 in TT-63-41115 (p. 18-19)

Trans. of Mashinostroenie (USSR) 1963, no. 4, p. 30-31.

A technical description.

Zlatopol'skii, M. Ya.
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Order from OTS $0.75 in TT-63-41115 (p. 7-10)

Trans. of Mashinostroenie (USSR) 1963, no. 4, p. 25-26. (Abstract available)

## Engines and Propulsion Systems

Bruel, André.
POSSIBILITIES OF REACTION PROPULSION APPLIED TO HELICOPTERS (Possibilités de la Reaction Appliquée aux Helicopters). [1963] [16p]
Order from SLA $1.60 TT-63-20547

Trans. of mono. Congrès National de l'Aviation Française [National Congress of French Aeronautics] (no. 3) 1-5 Apr 47. [Proceedings] section 4, Report no. 55.

Capetti, Antonio.
PERFORMANCES OF AIRCRAFT MOTORS. [1963] [25p] (figs omitted) 6refs
Order from SLA $2.60 TT-63-20541

Trans. of mono. Colloque sur la Combustion (Combustion Conference) (no. 2) Liege, 5 Dec 55, [Proceedings: selected combustion problems II] p. 5-28.

Eckert, B.
COOLING BLOWERS FOR INTERNAL COMBUSTION ENGINES (Kuhlgeblase für Verbrennungsmotoren). [1963] [15p] 14refs
Order from SLA $1.60 TT-63-20788

Trans. of MTZ [Motortechnische Zeitschrift] (Germany) 1940, Oct, p. 316-327.

Frese, Fritz.
DETERMINATION OF THE DIMENSIONS OF SUPERCHARGER COMPRESSORS (Bestimmung der Abmessungen von Aufladegeblasen). [1963] 4p 4refs
Order from SLA $1.10 TT-63-20789

Trans. from [MTZ] Motortechnische Zeitschrift (Germany) 1940, Jan.

Nosov, M. V.
CALCULATION OF THE BASIC DIMENSIONS OF A SINGLE-STAGE CENTRIPETAL TURBINE. 30 Jul 63 [89p] 5refs FTD-TT-63-682.
Order from OTS, SLA or ETC $8.10 TT-63-24261

Unedited rough draft trans. of mono. Raschet Osnovnykh Razmerov Odnostupenchatoi Tsentrostremitel'noi Turbiny, Moscow, 1961, 84p. (Abstract available)

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START-UP SYSTEMS FOR LARGE BOILER-TURBINE UNITS. [1963] [6p] 4refs C. E. Trans. 2900.
Order from OTS, SLA, or ETC $1.10 TT-63-24090

Trans. of Teploenergetika (USSR) 1962, v. 9, no. 8, p. 21-23. (Abstract available)

Stul'nikov, N. P.
ALL-UNION SCIENTIFIC AND TECHNICAL SESSION ON PROBLEMS OF GAS TURBINES (NO. 17) LENINGRAD, 28-31 MAY 63. 18 Dec 63, 2p JPRS: 22339.
Order from OTS $1.25 in TT-64-21050 (p. 35-36)

Trans. of Akademiya Nauk SSSR. Vestnik, 1963 [v. 33] no. 10, p. 114-115.

## Manufacturing Equipment and Processes

PROCESS AND PLANT FOR BURNING OR SINTERING OF CARBONATE OR OTHER ROCKS ON TRAVELLING GRATES IN TWO LAYERS. Jul 61
Order from C. L. A. I. R. A. Laboratories, Church Street, Welwyn, Herts, England £2 CLAIRA T.16

Trans. of German patent 1,078,188 [1960] by Metallesellschaft A. G.

Dovgopol, V., Gorshkov, A., Efimov, K., Shub, I., and Klebaner, V.
RESERVES AND REQUIREMENTS OF THE CASTING INDUSTRY: [SELECTED ARTICLES]. 7 Nov 63, 16p JPRS: 21768.
Order from OTS $0.75 in TT-63-41085 (p. 1-16)

Trans. from Ekonomicheskaya Gazeta (USSR) 1963, no. 38(111) p. 11-13.

Shchitova, V. M. and Rabinovich, I. Ya.
DYNAMIC CHARACTERISTICS OF THE POWER SOURCE IN AUTOMATIC INERT-GAS-SHIELDED WELDING. Oct 63, 2100 words
Order from HB $5.90 HB-6043

Trans. of Avtomaticheskaya Svarka (USSR) 1958, v. 11, no. 1, p. 44-47. (Abstract available)

## Transport, Traction and Hoist Facilities

CROSS-COUNTRY MOTOR-REPAIR SHOP. 4 Dec 63, 1p (fig omitted) JPRS: 22126.
Order from OTS $0.75 in TT-63-41284 (p. 9)

Trans. of Za Rulem (USSR) 1963 [v. 21] no. 8, p. 8.

A brief description of the GAZ-66 4-wheel drive truck.

MINSK MOTOR VEHICLES TESTED IN MOSCOW. 4 Dec 63, 1p (fig omitted) JPRS: 22126.
Order from OTS $0.75 in TT-63-41284 (p. 8)

Trans. of Za Rulem (USSR) 1963 [v. 21] no. 8, p. 8.

Brief descriptions are given of the MAZ-504B truck-tractor and the MAZ-5232 self-dumping semi-trailer.

MOSCOW'S LiAZ-677 LARGE-CAPACITY BUS. 4 Dec 63, 1p (fig omitted) JPRS: 22126.
Order from OTS $0.75 in TT-63-41284 (p. 11)

Trans. of Za Rulem (USSR) 1963 [v. 21] no. 8, p. 8.

USSR INDUSTRIAL DEVELOPMENT: SOVIET AUTOMOTIVE INDUSTRY NO. 45. 4 Dec 63, 19p (figs omitted) JPRS 22126.
Order from OTS $0.75 TT-63-41284

Consists of 9 articles from 1963 issues of Russian journals.
Separate entries have been prepared for 7 articles.

USSR INDUSTRIAL DEVELOPMENT: SOVIET AUTOMOTIVE INDUSTRY NO. 46. 11 Dec 63, 29p JPRS: 22233.
Order from OTS $1.00 TT-63-41344

Trans. of 12 articles and 15 short news items from Aug-Oct 63 issues of Russian newspapers and periodicals. (Abstract available)
Separate entries have been prepared for 4 articles.

USSR INDUSTRIAL DEVELOPMENT: SOVIET AUTOMOTIVE INDUSTRY NO. 47. 18 Dec 63, 20p JPRS: 22338.
Order from OTS $0.75 TT-64-21049

Trans. of 27 selected articles from Aug-Oct 63 issues of various Russian journals and newspapers.

Bernhard, K. A.
NOW TO SPECIALIZE THE TANK-CAR FLEET. [1963] [11p]
Order from OTS, SLA, or ETC $1.60 TT-63-20665

Trans. of Zheleznodorozhnyi Transport (USSR) 1963 [v. 45, no. 2] p. 44-49.

Bud'ko, G. D. and Nesterovich, V. P.
ADVANCED TECHNOLOGY IN CAR REPAIR SHOPS. [1963] [5p]
Order from OTS, SLA, or ETC $1.10 TT-63-20668

Trans. of Zheleznodorozhnyi Transport (USSR) 1963 [v. 45, no. 6] p. 82-85.

Cheishvili, Sh.
KAZ-608 CROSS-COUNTRY VEHICLE. 11 Dec 63, 2p JPRS: 22233.
Order from OTS $1.00 in TT-63-41344 (p. 11-12)

Trans. of Za Rulem (USSR) 1963 [v. 21] no. 10, p. 4.

Chernomordik, G. I.
HOW TO INCREASE TRAFFIC VELOCITY. [1963] [7p]
Order from OTS, SLA, or ETC $1.10 TT-63-20666

Trans. of Zheleznodorozhnyi Transport (USSR) 1963 [v. 45, no. 4] p. 60-64. (Abstract available)

Gribanov, A.
NEW MAZ TRUCKS ON THE ASSEMBLY LINE. 11 Dec 63, 3p JPRS: 22233.
Order from OTS $1.00 in TT-63-41344 (p. 13-15)

Trans. of Za Rulem (USSR) 1963 [v. 21] no. 10, p. 5.

Khandros, G.M.
IMPORTANT PROBLEMS CONCERNING IMPROVED FREIGHT CAR DESIGN. [1963] [5p]
Order from OTS, SLA, or ETC $1.10 TT-63-20663

Trans. of Zheleznodorozhnyi Transport (USSR) 1962 [v. 44, no. 12] p. 60-62.

Kol'tsov, N. M.
RHYTHMIC COOPERATION OF STATIONS AND SIDINGS. [1963] [4p]
Order from OTS, SLA, or ETC $1.10 TT-63-20664

Trans. of Zheleznodorozhnyi Transport (USSR) 1963 [v. 45, no. 1] p. 78-80. (Abstract available)

Lampe, Curt.
BASIC OUTLINE OF THE DEVELOPMENT OF DIESEL LOCOMOTIVES BY THE GERMAN FEDERAL RAILROADS. [1963] [8p] 5refs
Order from SLA $1.10 TT-63-16629

Trans. of MTZ; Motortechnische Zeitschrift (West Germany) 1953, v. 14, no. 8, p. 223-225.
Another trans. is available from SLA as 58-876.

Malkin, B.
GOR'KII HEAVY MACHINE BUILDING PLANT PRODUCES GZTM-891 VAN TRUCK. 4 Dec 63, 2p (fig omitted) JPRS-22126.
Order from OTS $0.75 in TT-63-41284 (p. 6-7)

Trans. of Avtomobil'nyi Transport (USSR) 1963 [v. 41] no. 8, p. 42.

Technical details are given.

Miropol'skii, Kh.
KOVROVETS 175-V MOTORCYCLE. 11 Dec 63, 2p JPRS: 22233.
Order from OTS $1.00 in TT-63-41344 (p. 20-21)

Trans. of Za Rulem (USSR) 1963 [v. 21] no. 8, p. 9.

Piir, A.
CARGO TRUCK TYPES. 4 Dec 63, 5p JPRS: 22126.
Order from OTS $0.75 in TT-63-41284 (p. 15-19)

Trans. of Avtomobil'nyi Transport (USSR) 1963 [v. 41] no. 8, p. 38-39.

Popov, G.
THE PLANT PRODUCTION COMMITTEE. 11 Dec 63, 5p JPRS: 22233.
Order from OTS $1.00 in TT-63-41344 (p. 1-5)

Trans. from Pravda, Moscow (USSR) 1963, 17 Sep, p. 2.

Rymin, V. and Shtutman, F.
M-830 COMBINATION SEMITRAILER. 4 Dec 63, 2p JPRS-22126.
Order from OTS $0.75 in TT-63-41284 (p. 13-14)

Trans. of Avtomobil'nyi Transport (USSR) 1963 [v. 41] no. 7, p. 45-46.

Selifonov, V.
THE AUTOMOTIVE INDUSTRY DURING THE FIFTH YEAR OF THE SEVEN-YEAR PLANT PERIOD.
4 Dec 63, 5p (fig omitted) JPRS: 22126.
Order from OTS $0.75 in TT-63-41284 (p. 1-5)

Trans. of Za Rulem (USSR) 1963 [v. 21] no. 4, p. 8-9.

Sytsko, P. A. and Gutkovskii, V. A.
TOWARDS BETTER UTILIZATION OF LOCOMOTIVES. [1963] [5p]
Order from OTS, SLA or ETC $1.10 TT-63-20669

Trans. of Zheleznodorozhnyi Transport (USSR) 1963 [v. 45, no. 7] p. 26-29.

Yushchenko, N. R. and Shafit, E. M.
MARSHALLING OF SIX-AXLE CARS IN HUMP-YARDS AND BRAKING CHARACTERISTICS OF RETARDERS. [1963] [7p]
Order from OTS, SLA or ETC $1.10 TT-63-20667

Trans. of Zheleznodorozhnyi Transport (USSR) 1963 [v. 45, no. 5] p. 78-81.

## MATERIALS

PLASTERING AND RENDERING. Jul 61
Order from C. L. A. I. R. A. Laboratories, Church Street, Welwyn, Herts, England £6 CLAIRA T. 15

Trans. of German standard [specification] DIN 18, 550.

Bock, H.
NOMOGRAMS FOR DETERMINING OPERATING DATA FOR LIME KILNS. Jul 61.
Order from C. L. A. I. R. A. Laboratories, Church Street, Welwyn, Herts, England £5 CLAIRA T. 12

Trans. of Zement-Kalk-Gips (West Germany) 1960, v. 13, no. 7, p. 302-310.

Czech, R. and Gottschalk, F.
READY MIXED MORTAR IN SCANDINAVIA. Jul 61
Order from C. L. A. I. R. A. Laboratories, Church Street, Welwyn, Herts, England £10 CLAIRA T. 8

Trans. of Zement-Kalk-Gips (West Germany) 1958, v. 11, no. 12, p. 550-562.

Koposov, L., Chernyshev, A., and Gambardella, E.
SYNTHETIC RATHER THAN NATURAL FOODSTUFFS (Vmesto Pishchevogo Syrya Sinteticheskoe)
E. S., tr. 18 Oct 63, 4p I-3485.
Order from OTS $0.50 TT-63-11735

Trans. from Ekonomicheskaya Gazeta (USSR) 1963, [no. 32(105)] p. 19. (Abstract available)

Pleva, M.
A CONTRIBUTION TO THE HYDRATION OF SOFTLY BURNED LIMES. Jul 61
Order from C. L. A. I. R. A. Laboratories, Church Street, Welwyn, Herts, England £10 CLAIRA T. 14

Trans. of Silikaty (Czechoslovakia) 1960, v. 4, no. 4, p. 307-319.

Schimmel, G.
LIME PUTTY UNDER THE ELECTRON MICROSCOPE. Jul 61
Order from C. L. A. I. R. A. Laboratories, Church Street, Welwyn, Herts, England £2 CLAIRA T. 6

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Order from OTS $1.25 in TT-63-41141 (p. 31)

Trans. of Ekonomicheskaya Gazeta (USSR) 1963, no. 41[114] p. 38.

STEEL PRODUCTION BY ELECTROSLAG REMELTING. 19 Nov 63, 18p 9refs JPRS: 21912.
Order from OTS $0.50 TT-63-41161

Trans. of #Avtomaticheskaya Svarka (USSR) 1963 [v. 16] no. 9(126) p. 78-81; #Stal' (USSR) 1963 [v. 23] no. 9, p. 805-809.
Separate entries have been prepared for the individual articles.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 160 15 Nov 63, 39p JPRS: 21873.
Order from OTS $1.25 TT-63-41141

Consists of 20 articles from 1963 issues of Russian journals and newspapers. Separate entries have been prepared for 6 articles. (Abstract available)

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 162. 27 Nov 63, 44p JPRS: 22062.
Order from OTS $1.25 TT-63-41247

Consists of 16 articles from Aug-Sep 63 issues of Russian newspapers.
Separate entries have been prepared for 8 articles.

Billigmann, J.
INVESTIGATION INTO THE WORKABILITY OF COLD-HEADING STEELS. Nov 63, 4700words
Order from HB $12.50 HB-5020

Trans. of Stahl und Eisen (West Germany) 1951, v. 71, no. 16, p. 826-836.

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## Nonferrous (except light) Metals

USSR INDUSTRIAL DEVELOPMENT: SOVIET NONFERROUS METALLURGY NO. 77. 10 Dec 63, 23p JPRS: 22214.
Order from OTS $0.75 TT-63-41331

Trans. of 5 articles and 12 short newsbriefs from Jul-Sep 63 issues of selected Russian newspapers and periodicals. (Abstract available)

USSR INDUSTRIAL DEVELOPMENT: SOVIET NONFERROUS METALLURGY NO. 78 (ACTIVITIES IN THE ALUMINUM, COPPER, LEAD AND ZINC, GOLD, AND GRAPHITE INDUSTRIES). 13 Dec 63, 4p. JPRS: 22288.
Order from OTS $0.50 TT-64-21020

Trans. of short selected articles from Sep-Oct 63 issues of Russian newspapers.

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## NUCLEAR PHYSICS AND NUCLEAR CHEMISTRY

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 370 (PHYSICS AND MATHEMATICS SERIES). 13 Dec 63, 13p JPRS: 22263.
Order from OTS $0.75 TT-64-21002

Consists of abstracts of articles from the scientific and technical journals of Czechoslovakia and Poland.

Included are abstracts from: Jaderna Energie, Prague, Vol 9, No 10, 1963; and Nukleonika, Warsaw, Vol 8, No 7, 1963.

### Instruments and Installations

RADIOACTIVE ISOTOPES AND RADIATION. 19 Dec 63, 4p JPRS: 22373.
Order from OTS $1.00 in TT-64-21066 (p. 8-11)

Trans. from Ekonomicheskaya Gazeta (USSR) 1963, no. 40(113) p. 5.

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Order from OTS, SLA, or ETC $7.60 TT-63-24599

Unedited rough draft trans. of mono. Zashchita ot Radioaktivnykh i Otravlyayushchikh Veshchestv, Moscow, 1962, 88p. (Abstract available)



STUDY OF THE COATING OF URANIFEROUS CERAMIC PARTICLES BY MEANS OF METALLIC NIOBIUM. Quarterly rept. no. 3, 1 Jan-31 Mar 62. [1963] 51p
Contract 066-61-7 RDB
Order from OTS, SLA, or ETC $5.60 EURAEC-309

Trans. of a rept. from Société d'Études, de Recherches et d'Applications pour l'Industrie, Brussels (Belgium) Apr 62.

STUDY [OF] THE COATING OF URANIFEROUS CERAMIC PARTICLES WITH NIOBIUM METAL. Final rept. no. 1. [1963] 76p
Contract 066-61-7 RDB
Order from OTS, SLA, or ETC $7.60 EURAEC-487

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Order from SLA $1.10 TT-63-20486

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## PHYSICS

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 375 (PHYSICS AND MATHEMATICS SERIES). 17 Dec 63, 14p JPRS: 22322.
Order from OTS $0.50 TT-64-21039

Consists of abstracts of articles from the scientific and technical journals of Czechoslovakia, East Germany, and Hungary.

Included are abstracts from the following sources: Aplikace Matematiky, Prague, Vol 8, No 5, 1963; Experimentelle Technik der Physik, Jena, Vol 11, No 5, 1963; A Magyar Tudomanyos Akademia Matematikai es Fizikai Tudomanyok Osztalyanak Kozlemenyei, Budapest, Vol 13, No 3, 1963.

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Order from OTS $0.50 TT-64-21067

Consists of abstracts of articles from the scientific and technical journals of Bulgaria, East Germany, and Hungary.

Included are abstracts from the following sources; Fiziko-matematichesko Spisanie, Sofia, Vol 6(39), No 2, 1963; Annalen der Physik, Leipzig, Vol 12, No 1-2, Oct 63; Magyar Fizikai Folyoirat, Budapest, Vol 11, No 4, 1963.

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The Reproduced Tables of Contents are arranged alphabetically by English title.


Referativnyi Zhurnal. Metallurgiya (USSR) 1962, no. 10. ..... C-99
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Order from AIP $5.00, $25.00/year.

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**The U.S.S.R. Abstracts Journal of Metallurgy**

**Part B — Technology of Metals**

1962 · Number 10

## CONTENTS

| | PAGE |
|---|---|
| General matters. Personalia. History. Methodology | 1 |
| Theory of metallurgical processes | 2 |
| Metallurgical heat technology | 6 |
| Control instruments and automation | 11 |
| Ferrous metallurgy | 13 |
| Metallurgy of non-ferrous and rare metals | 39 |
| Powder metallurgy | 53 |
| Rolling mill and drawing practice | 55 |
| Welding | 73 |
| Corrosion and metal protection. Cleaning. Pickling | 91 |
| Heat treatment and thermo-chemical treatment | 96 |
| Technical analysis | 99 |

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Vol. 24, No. 5 (Russian Original Dated May, 1963) November, 1963

## CONTENTS

| | PAGE | RUSS. PAGE |
|---|---|---|
| Methods for Solving Variational Problems. II. Sliding Regimes. V. F. Krotov | 539 | 581 |
| Study of the Stability of Controlled Systems, Taking the External Load of a Hydraulic Actuator into Consideration. B. Zh. Maigarin | 554 | 599 |
| A Method of Stabilizing Third-Order Control Systems with Large Gains. II. E. A. Barbashin and V. A. Tabueva | 562 | 608 |
| On a Method of Controlling a Certain Class of Objects with Varying Parameters. M. A. Bermant and S. V. Emel'yanov | 568 | 615 |
| Multiloop Combined-Control Systems. M. V. Meerov | 580 | 628 |
| On the Structural Stability of Single-Loop Control Systems of Normal Type. E. S. Pyatnitskii | 590 | 640 |
| Detection of a Random Signal Received along Several Channels with Independent Noises. L. P. Sysoev | 599 | 649 |
| An Accurate Design Method for Semiconductor Switching Circuits Used in Industrial Automation. S. M. Domanitskii and I. V. Prangishvili | 606 | 657 |
| Magnetic Time-Lag Element Based on the Counting of Pulses of Unlike Polarity. M. M. Lotosh | 614 | 666 |
| Contactless Relay Using Transistors. K. A. Brusilovskii and S. Yu. El'kind | 621 | 675 |
| Magnetic Generator for Infra-Low and Low-Frequency Harmonic Oscillations. V. I. Orlov | 627 | 683 |
| Synthesis of an Optimal System in the Presence of Noise with the Correlation Function $R_n(\tau) = \beta^2 \exp(-a\lvert\tau\rvert)$ and of Signal in the Form of a Polynomial with an Arbitrary Number of Terms. B. N. Dobzhinskii | 633 | 690 |
| Radio Relaying of Signals along a Column of Drilling Pipes as a Channel of Communication with the Drilling Face. B. A. Grachev and A. I. Leonov | 635 | 692 |
| Semiconductor Diodes as Temperature Data Transmitters. I. L. Rotbert and N. P. Udalov | 639 | 696 |
| BIBLIOGRAPHY | | |
| Literature on the Theory of Switching Devices and Finite Automata (1959-1960). V. D. Kazakov and O. P. Kuznetsov | 642 | 699 |
| LETTERS TO THE EDITOR | | |
| Regarding the Paper "Methods of Minimization and Design of Bridge Relay Circuits" (in Collected Papers on "Automatic Regulation and Control" Published by the Academy of Sciences, USSR, 1961). V. P. Didenko | 651 | 713 |

# Automation and Remote Control

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EDITORIAL BOARD OF AVTOMATIKA I TELEMEKHANIKA

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Vol. 24, No. 6 (Russian Original Dated June, 1963) November, 1963

## CONTENTS

| | PAGE | RUSS. PAGE |
|---|---|---|
| Absolute Stability of Nonlinear Control Systems in Critical Cases. II. V. A. Yakubovich | 655 | 717 |
| On Critical Cases in the Theory of Absolute Stability of Controlled Systems. M. A. Aizerman and F. R. Gantmakher | 669 | 732 |
| The Analytical Design of Controls Based on Electronic Analog Devices. Yu. M. Repin and V. I. Tret'yakov | 674 | 738 |
| A Variational Approach to the Problem of Invariance of Automatic Control Systems. I. L. I. Rozonoér | 680 | 744 |
| On Optimal Processes in Coupled Systems. R. Gabasov and F. M. Kirillova | 692 | 757 |
| Synthesis of Optimum Compensation According to the Servosystem Input Signal. V. I. Ivanenko | 699 | 764 |
| Recognition Algorithms. I. Ya. Levin and L. B. Sapozhnikov | 704 | 769 |
| Pattern Recognition Using Generalized Portraits. V. N. Vapnik and A. Ya. Lerner | 709 | 774 |
| Example of a Problem in the Joint Behavior of Two Automata. V. L. Stefanyuk | 716 | 781 |
| The Dynamics of a Continuous Automatic Optimizer for One Class of Systems. A. A. Belen'kii and A. B. Chelyustkin | 720 | 785 |
| Servosystem Correction by Means of Digital Differential Analyzers for the Case of Statistical Inputs. Yu. V. Kovachich | 735 | 799 |
| Pulse Generators of Stable Frequency. V. A. Il'in | 744 | 808 |
| Error-Correcting Codes with Non-Binary Alphabet in Frequency Remote-Control Systems. A. G. Mamikov and T. L. Sletova | 750 | 815 |
| Unreliability Losses in Systems for Transmission of Independent Local Information with Various Failure Detection Methods. G. A. Shastova | 754 | 820 |
| The Reliability of Information Nets. V. A. Zhozhikashvili and Yu. I. Shmukler | 758 | 824 |
| Electrical Function Generator of the Pulse-Spectrum Type. V. B. Smolov and E. P. Ugryumov | 764 | 830 |
| On the Absolute Stability of Nonlinear Third-Order Automatic Control Systems. B. Zh. Maigarin | 772 | 839 |
| Time-Analytical Description of Operation of Logical Elements. G. M. Proskurin | 778 | 844 |
| Specialized Electronic Computer for the Correlation and Spectral Analysis of Random Processes, with Input Data Presented in Visual Form or on Magnetic Tape. T. I. Bartkus, I. I. Gikis, F. P. Lapienis, S. K. Lukoshevichyus, V. V. Meshcheryakov, and L. A. Tel'ksnis | 784 | 850 |
| EVENTS | | |
| International Symposium on the Theory of Switching Circuits and the Theory of Finite Automata. V. D. Kazakov | 790 | 856 |

English Edition of
Bulletin (Izvestiya), Academy of Sciences, USSR, Geophysics Series No. 9, 1963

CONTENTS


| | Page English | Page Russian |
|---|---|---|
| **PHYSICS OF THE SOLID EARTH** | | |
| I. S. BERZON, L. I. RATNIKOVA AND M. I. RATS-KHIZGIYA, A Study of Converted Reflected Waves in Media with Weak Velocity Differentiation | 789 | 1293-1306 |
| E. I. GAL'PERIN (HALPERIN) AND A. V. FROLOVA, Study of Seismic Waves by a Combination of Vertical and Horizontal Profiling | 798 | 1307-1323 |
| V. I. MESHBEI AND I. M. MUZYKA, The Use of Directed Sources for the Isolation of Converted Sliding-Diffracted-Head $S_{12}P_{21}$ Waves and Sliding-Diffracted $S_{12}P_1$ Waves | 808 | 1324-1339 |
| E. F. SAVARENSKIĬ, S. A. FEDOROV AND B. V. GOGICHAĬSHVILI, The Determination of the Actual Motion of the Ground and Its Spectrum from a Seismogram | 818 | 1340-1347 |
| K. N. EGOROV, Methods of Determining the Absolute Value of Gravity by Interference Measurements of a Free-Fall Length | 823 | 1348-1356 |
| E. M. LIN'LOV, A Long-Period Magnetron Seismograph | 829 | 1357-1360 |
| V. F. BONCHKOVSKIĬ, A Specific Case of Connection between the Variations of Tilts and Linear Deformations and the Distribution of Atmospheric Pressure | 832 | 1361-1368 |
| YU. B. SHAUB (SCHAUB), The Determination of the Distribution of Specific Electrical Conductivity in a Horizontally Layered Medium by Aerial Electric Induction Exploration | 837 | 1369-1376 |
| YU. V. KHOMENYUK, Integral Characteristics of Transient Processes in Electric Exploration | 842 | 1377-1380 |
| V. D. STADUKHIN, The Determination of the Magnetic Susceptibility of Rocks and Ores by Measurement of the Magnetic Field Intensity in Artifically Magnetized Bore-Holes for the Purpose of Location and Evaluation of Iron-Ore Deposits | 845 | 1381-1385 |
| **SCIENTIFIC REPORTS** | | |
| V. P. KUZNETSOV, SH. S. RAGIMOV AND S. M. ALIEVA, The Mashtagi-Nardaran Earthquakes of 17 December 1961 | 848 | 1386-1388 |
| SH. S. RAGIMOV, R. D. DZHAFAROV, Z. A. BAGIROVA, I. F. MAMEDOV, S. S. AGA-ZADE, E. R. ALIEVA, A. M. ALIEVA AND V. B. ALIMAMEDOVA, The Caspian Earthquake of 18 December 1961 | 850 | 1389-1391 |
| V. P. KUZNETSOV, SH. S. RAGIMOV, R. D. DZHAFAROV, A. M. ALIEV, Z. A. BAGIROVA, S. S. AGA-ZADE, I. F. MAMEDOV, S. M. ALIEVA, A. S. KULIEV, E. M. DEMIKHOVSKAYA, O. S. SUBASHIEVA, A. B. AGALAROVA, SH. A. SHAKHMALIEVA, G. I. MIRZOEVA AND V. A. KASPAROV, The Caspian Earthquake of 27 January 1963 | 852 | 1392-1393 |
| V. M. ARKHANGEL'SKAYA, Chronicle: Session of the Council on Seismology, Academy of Sciences, USSR, in Frunze | 854 | 1394-1398 |
| **PHYSICS OF THE SEA AND OF THE ATMOSPHERE** | | |
| V. A. KHALKECHEV AND L. N. GUTMAN, The Motion of Cold Air Masses Along Mountain Ranges | 858 | 1399-1409 |
| B. I. BELYAEV, I. S. PAVLOVA AND V. M. RYABOV, On the Technique of Cloud Dispersal Over Large Areas | 864 | 1410-1416 |
| E. R. FAINBERG (FEINBERG), Solution of the Problem Regarding the Influence of Hills on the Steady Motion of Cold Air | 868 | 1417-1422 |
| I. P. SMIRNOV, Forecast of the Circulation Index by Means of Momentum Transport for the Barotropic Model of the Atmosphere | 871 | 1423-1426 |
| KH. N. ZEĬTUNYAN, The Nonlinear Problem of Cloud Formation Behind an Obstacle | 874 | 1427-1437 |
| A. M. GOLOVIN, On the Spectrum of Coagulating Cloud Droplets. II | 880 | 1438-1447 |
| V. I. SKATSKIĬ, An Airborne Water-Content Meter for Clouds with Sufficient Liquid to Form Droplets | 885 | 1448-1456 |
| **SCIENTIFIC REPORTS** | | |
| A. I. ERSHKOVICH, Electron with Energy Higher than 1600 Kev in Radiation Zones of the Earth | 891 | 1457-1461 |
| A. M. KUZNETSOV AND V. A. KUZNETSOV, Symmetrical Forms of Pebbles Due to Natural Abrasion | 894 | 1462-1467 |


English Edition Published January 1964

Bulletin of the Academy of Sciences of the USSR - Physical Series
Vol. 27, No. 1 - January 1963

TABLE OF CONTENTS


| | Page Orig. | Trans. |
|---|---|---|
| Transactions of the Fourteenth Conference on Spectroscopy (Continued from Vol. 26, Nos.7 & 10; to be concluded in Vol. 27, No.7) | | |
| New data on spectroanalysis with preliminary contact-spark transport of the material - V.S.Baskov, S.I.Berger, M.G.Mal'tsev, M.N.Palladin & K.I.Taganov | 2 | 3 |
| Thermochemical processes occurring under the conditions of spectroscopic analysis - N.F.Zakhariya, O.P.Turulina & N.A.Fuga | 4 | 5 |
| Electric discharge sampling for constructing working curves for analysis of metals and alloys - E.S.Obukhova, N.K.Rudnevskii & K.I.Taganov | 6 | 7 |
| Concerning air injection of powders into the arc in analysis of ores - A.K.Rusanov & N.T.Batova | 8 | 9 |
| Investigation of the fine structure of the fluorescence spectra of polycyclic aromatic hydrocarbons as a method of analysis of carcinogenic substances - P.P.Dikun | 9 | 11 |
| Absorption and luminescence spectra of stilbene and diphenyl acetylene in frozen solutions at 77°K - G.V.Gobov | 11 | 13 |
| Concerning appearance of free radicals of the triphenylmethyl series - Yu.I.Kozlov & D.N.Shigorin | 14 | 18 |
| Effect of scattered light on the results of measurements of luminescence spectra - V.P.Klochkov | 17 | 21 |
| Measurement of the half-width of the apparatus function of a monochromator in the infrared region by means of the transmission spectrum of a double Fabry-Perot etalon - A.F.Vasil'ev | 19 | 23 |
| Measurement of the intensity and width of absorption bands in the infrared region - A.G.Finkel' | 22 | 26 |
| Spectral and energy characteristics of total internal absorption filters taking into account their geometric dimensions - L.V.Iogansen | 24 | 29 |
| Infrared dispersion filters (Christiansen filters) - I.F.Gurinovich & N.A.Borisevich | 26 | 31 |
| Investigation of the absorption of optical crystals in the infrared in the temperature range from 93 to 693°K - I.S.Pominov & A.L.Stolov | 29 | 34 |
| Spectroscopic determination of the isomeric composition of reaction products - Ya.V.Rashkes | 32 | 37 |
| Investigation of decomposition of nitric oxide by absorption spectroscopy - V.N.Ivanov | 35 | 40 |
| Spectroscopic investigation of reaction of dyes with hydrazine - A.T.Vartanyan | 37 | 42 |
| Use of vibrational spectra for studying the mechanism of auto-oxidation of benzaldehyde - A.N.Sevchenko, Yu.A.Ol'dekop, I.P.Zyat'kov & G.S.Bylina | 41 | 45 |
| Spectroscopic investigation of oxidation of vitamin C and its stabilization by vitamin $B_1$ - G.Ionaitis & B.Rubikaite | 45 | 48 |
| Variation of the absorption spectra of solutions of vitamins $B_1$ and C as a function of the concentration and solvent - G.Ionaitis & B. Rubikaite | 47 | 51 |

Prototropic regrouping in the dipyrrylmethene series - L.D.Miroshnichenko & R.P.Evstigneeva 50 54
Ultraviolet absorption spectra of hydroxy- and methoxyphenyldiazonium chlorides - L.A.Kazitsyna, O.A.Reutov, B.S.Kikot' & B.V.Rassadin 53 57
Infrared spectra and structure of δ-keto acids - Yu.A.Pentin, I.S. Trubnikov, R.B.Teplinskaya, N.P.Shusherina & R.Ya.Levina 55 59
Ultraviolet absorption spectra of some 2,5-substituted furans - A.D. Peshekhonova, A.A.Ponomarev & M.D.Lipanova 58 62
A spectroscopic method for investigating high-molecular compounds and its potentialities - M.V.Savost'yanova & V.A.Chernyshev 62 66
Effect of temperature on the vibrational spectra of naphthenes - A.V. Sechkarev & R.S.Lebedev 65 69
EPR spectrometer - V.B.Lebedev 69 73
Investigation of the structure of some intracomplex compounds by the method of electron paramagnetic resonance - B.V.Lokshin, A.K. Piskunov, L.A.Kazitsyna & D.N.Shigorin 75 79
EPR spectra of some gamma-irradiated compounds with multiple bends - V.I.Smirnova, D.N.Shigorin & T.S.Zhuravleva 78 82
Paramagnetic absorption in potassium chromium sulfate and manganese ammonium sulfate in parallel fields - V.A.Kutuzov 81 85
Influence of intermolecular interactions on the chemical shifts of protons in some organic systems - B.A.Arbuzov, Yu.Yu.Samitov & A.I.Konovalov 82 87
Effect of diffusion on the variation in intensity of proton resonance lines with the concentration of paramagnetic ions - A.A.Popel' & E.D.Grazhdannikov 86 91
Proton magnetic resonance spectra of some substituted dioxolanes - B.A.Arbuzov, Yu.Yu.Samitov & L.K.Yuldasheva 89 95
Concerning pulse magnetic and acoustic spectroscopy - U.Kh.Kopvillem & R.M.Mineeva 93 98
Magnetic and acoustic spectroscopy for structural analysis of high-melting crystals - U.Kh.Kopvillem 95 101
Determination of methyl and methylene groups in narrow paraffin and paraffin-naphthene fractions from their infrared absorption spectra - S.I.Krasnova, A.F.Mal'nev, G.A.Puchkovskaya & V.T.Sklyar 98 104
Results obtained in studying Uzbekistan petroleums by Raman spectroscopy - E.G.Burova & G.Kh.Khodzhaev 100 106
Spectroscopic investigation of the individual hydrocarbon composition of ligroins from Tatar petroleums - B.Le & F.A.Urmancheev 102 108
Characterization of solid petroleum paraffins by their infrared absorption in the 700 $cm^{-1}$ region - A.N.Guseva, L.D.Ashkinadze & I.E.Leifman 104 111
Investigation of tarry substances from petroleums by infrared absorption spectroscopy - E.Ya.Yatsenko, V.G.Gutsalyuk & S.R.Rafikov 107 114
Geochemical characterization of bitumens on the basis of their infrared absorption spectra - S.S.Geiro 110 117
Reports presented at the Fourteenth Conference on Spectroscopy that are being published in Zavodskaya Laboratoriya (Trans.Industrial Laboratory) 114 121

Transactions of the Twelfth Annual Conference on Nuclear Spectroscopy
(Concluded from Vol. 26, Nos.2, 8, 9 & 12)

Radiative transition probabilities in odd and in odd-odd deformed nuclei - M.E.Voikhanskii 118 126
Investigation of isomeric periods in the $10^{-4}$ to $10^{-1}$ sec range in even-even nuclei - V.V.Remaev, Yu.S.Korda & A.P.Klyucharev 125 133
Beta-stability of heavy elements - N.N.Kolesnikov, A.P.Krylova & V.K.Kandybarov 132 139
Some new data on the mechanism of production of light nuclei under proton bombardment - A.K.Lavrukhina, L.P.Moskaleva & R.I.Kuznetsova 137 144
Investigation of continuous spectra of neutrons and gamma-rays by the method of counting efficiencies - G.G.Doroshenko & A.V.Larichev 141 148

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# GEOCHEMISTRY

## A Translation of

## ГЕОХИМИЯ

No. 3 1963


CONTENTS


A. P. Vinogradov. Centenary of V. I. Vernadskii's Birth ..... 211
A. P. Vinogradov. Biogeochemical provinces and their role in organic evolution ..... 214
N. V. Belov. One of V. I. Vernadskii's fundamental generalizations .. 229
N. I. Khitarov, V. A. Pugin, Pin Chao and A. B. Slutskii. Relations between andalusite, kyanite and sillimanite at moderate temperatures and pressures ..... 235
V. V. Shcherbina. Differences in geochemical processes occurring with the participation of potassium and sodium ..... 245
V. I. Gerasimovskii. Geochemistry of fluorine in nepheline syenites . 253
I. E. Starik, E. V. Sobotovich and M. M. Shats. The problem of the origin of meteorites and tektites ..... 261
V. V. Cherdyntsev, I. V. Kazachevskii nd E. A. Kuz'mina. Isotopic composition of uranium and thorium in the supergene zone ..... 271
A. I. Tugarinov, S. I. Zykov and E. V. Bibikova. Determination of the age of sedimentary rocks by the lead-uranium method ..... 284
K. P. Florenskii. Cosmic dust and the present state of the investigation of the Tungus Meteorite ..... 301
A. A. Beus, B. P. Sobolev and Yu. P. Dikov. Geochemistry of beryllium in high temperature postmagmatic mineralization ..... 316
I. D. Ryabchikov and L. N. Kogarko. Effect of anion exchange on the acidity of magma ..... 324
M. G. Valyashko, A. I. Polivanova and I. K. Zherebtsova. Experimental investigation of movement of solutions differing in density through porous rocks and vertical hydrochemical zonation. ..... 332
S. V. Bruyevich. Rates of mineralization of suspended organic matter in the low latitudes of the Pacific during the pre-depositional stage ..... 349
S. I. Smirnov. Statistical estimation of the geochemical background in geochemical prospecting ..... 353



*Published by*

**The Geochemical Society**

Translated and Produced by

*scripta technica, inc.*

C-106

English Edition of
Geodesy and Aerophotography, No. 1, 1963

CONTENTS


| | English Page | Russian Page |
|---|---|---|
| A.A. IZOTOV: Geodetic Methods of Studying the Movements of the Earth's Crust | 1 | 3 |
| A.I. DURNEV: The Accuracy of the Geodetic Intersection Method | 4 | 11 |
| F.F. PAVLOV: Polygonometric Networks and the Effect of Errors on Their Accuracy | 11 | 25 |
| V.P. KOZLOV: Evaluation of the Accuracy of Planned Triangulation Networks | 14 | 31 |
| V.V. KOTOV: On the Problem of Angle Adjustment in Polygonometric Traverses by the Equal Corrections Method | 17 | 37 |
| V.A. ROMANOVSKIY: The Solution of Geodetic Problems Employing a "Reduced Azimuth" | 18 | 41 |
| B.B. SERAPINAS: The Application of the Pranis-Pranevich Method for the Adjustment of Triangulation by Directions | 23 | 51 |
| V.V. BROVAR: The Solution of Certain Outer Boundary Problems for the Earth's Surface | 25 | 55 |
| LIANG TSENG-YUNG: Determination of Time, Longitudes, Latitudes and Azimuths by the Photoelectric Method | 32 | 73 |
| V.V. SHEVCHENKO: A Star Map of the Circum-Polar Region of the Northern Hemisphere of the Moon | 38 | 87 |
| B.N. RODIONOV: Band Shutter for the AFA-42/100 Aerial Camera | 41 | 93 |
| G.D. FEDORUK: Problems in the Modernization of Processes and the Design of the STD-2 Stereometer | 43 | 97 |
| L.A. VAKHRAMEYEVA: Generalized Formulas for Conformal Projections | 48 | 109 |
| S.V. YELISEYEV: The Present-Day Period of Development in Geodetic Instrument Construction | 51 | 117 |
| V.F. PAVLOV: Certain Technical and Economic Indices in Triangulation Work | 56 | 127 |
| A.S. TROFIMOV: Automation of Photogrammetric Processes | 59 | 135 |
| M.A. MITNIKOV and A.V. BUTKEVICH: The Thirtieth Anniversary of the Novosibirsk Institute of Geodetic, Aerial Mapping and Cartographic Engineers | 61 | 139 |
| Nikolay Georgiyevich Kell' | 63 | 143 |
| Boris Vladimirovich Fefilov | 65 | 147 |
| Andrey Ivanovich Durnev | 66 | 149 |


English edition published, November 1963

English Edition of
Geomagnetism and Aeronomy, No. 2, 1963

TABLE OF CONTENTS


| | English page | Russian page |
|---|---|---|
| A.V. Gurevich: The Distribution of Particles in a Centrally Symmetric Field | 151 | 185 |
| K.H. Schmelovsky: Theoretical Investigations of the Structure of the F2 Layer and the Outer Ionosphere | 165 | 204 |
| A.D. Shevnin: The Magnetic Field of the Ring Current | 172 | 213 |
| G.A. Mikhaylova and T.I. Kurakina: The Phase Velocity of Electromagnetic Waves in the 1-25 kc/s Range | 180 | 223 |
| Ya.I. Fel'dshteyn: Some Problems Concerning the Morphology of Auroras and Magnetic Disturbances at High Latitudes | 183 | 227 |
| N.I. Dzyubenko: The Latitudinal Diurnal Drift of Auroras | 193 | 240 |
| V.P. Samsonov and N.S. Zaretskiy: The Azimuthal and Geographic Distribution of Auroral Rays Revealed by Data for the Yakutsk Network of Stations | 198 | 246 |
| A.A. Pokhunkov: The Possibility of using a Radio-Frequency Mass Spectrometer for the Measurement of the Absolute Concentrations of Atomic Gases in the Upper Atmosphere | 203 | 252 |
| A.S. Besprozvannaya: The Relationship between Disturbance of the F2 Layer and Planetary Magnetic Activity | 211 | 262 |
| B.S. Shapiro and T.L. Vinnikova: The Programming of Computations of Ionospheric True Heights on Electronic Computers | 218 | 269 |
| G. Nestorov and J. Taubenheim: Investigation of the E Layer of the Ionosphere at the Time of the Solar Eclipse of 15 February 1961 | 224 | 277 |
| L.G. Makhotkin: Statistics of Atmospheric Radio Interference | 230 | 284 |
| G.I. Grigor'yev and V.P. Dokuchayev: The Influence of Diurnal Variation of the Electric Conductivity of the Ionosphere on the Spectrum of Sq Variations | 237 | 293 |
| V.Ye. Kashprovskiy: Local Conductivities of Soils and their Distribution over the Territory of the USSR | 240 | 297 |
| Kh. Gul'medov: Turbulence in the Upper Atmosphere as Revealed by Optical Observations of Meteor Trails at Ashkhabad and Kazan' | 249 | 309 |
| L.A. Katasev: The Influence of the Earth's Atmosphere on the Motion of Meteor Particles | 254 | 315 |
| R.S. Steblova: Distribution of the Steady-State Regime in Atmospheric Ozone | 261 | 324 |
| N.V. Adam, N.P. Ben'kova, V.P. Orlov, N.K. Osipov and L.O. Tyurmina: Spherical Analysis of the Main Geomagnetic Field and Secular Variations | 271 | 336 |
| N.K. Osipov: The Outer Part of the Earth's Main Magnetic Field | 286 | 354 |
| **BRIEF COMMUNICATIONS** | | |
| L.I. Dorman, Ye.V. Kolomeyets, L.V. Kozak, V.T. Pivneva and G.A. Sergeyeva: Fluctuations of Cosmic-Ray Intensity during a Forbush Decrease | 293 | 362 |
| O.V. Khorosheva: The Extent of Auroral Arcs and their Orientation in Space | 294 | 363 |
| A.S. Besprozvannaya: Spatial Variability of Disturbance of the F2 Layer | 297 | 366 |
| V.G. Dubrovskiy and S.A. Kramarenko: Some Additional Comments on the Diurnal and Geographic Distribution of Ionospheric and Magnetic-Ionospheric Disturbance | 299 | 368 |
| A.P. Nikol'skiy and A.I. Ol': Comments on the Article "Certain Problems of Magnetic Activity. I.", by V.M. Mishin and I.A. Zhulina | 301 | 370 |
| M.A. Gintsburg: Determination of all Three Components of the Vector of the Static Magnetic Field from its Magnitude | 304 | 374 |
| K.G. Ivanov and N.V. Mikerina: A Peculiarity in the Occurrence of the Preliminary Negative Impulse in SSC | 305 | 375 |
| Ye.G. Gus'kova: Investigation of Natural Remanent Magnetization of Stony Meteorites | 308 | 378 |
| N.K. Osipov: Secular Variations of the Energy Spectrum of the Inner Part of the Earth's Main Magnetic Field | 312 | 381 |
| N.K. Osipov: The Nonpotential Part of the Earth's Main Magnetic Field | 314 | 383 |
| V.I. Afanas'yeva: Geoactivity and its Possible Causes (Preliminary Communication) | 316 | 385 |
| I.S. Pandul: Determination of Magnetic Declination at Stations in the State Geodetic Networks | 317 | 386 |
| Ya.L. Blokh, V.M. Bondarenko and A.G. Tarkhov: Underground Recording of Cosmic Radiation for the Purpose of Solving Certain Geological Problems | 320 | 390 |
| M.M. Ivanov: Some Problems Involved in Work with Fluxgate Vector Magnetometers on Shipboard | 323 | 392 |
| A.A. Korchak: The Polarization of Synchrotron Radiation in a Dipole Magnetic Field | 324 | 394 |
| **NEWS NOTES** | | |
| L.P. Struina: The Transfer of the Magnetic Station from Tikhaya Bay to Heiss Island | 328 | 397 |
| **REVIEWS** | | |
| Sh.G. Shlionskiy: A Photoelectric Harmonic Analyzer. From: Izmeritel'naya Tekhnika, 1962, No. 2 | 330 | 398 |


English edition published, December 1963

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# Industrial Laboratory

*A translation of Zavodskaya Laboratoriya, a publication of the State Scientific-Technical Committee of the Council of Ministers of the USSR*

(Russian Original Dated July, 1963)

Vol. 29, No. 7, pp. 827-966 December, 1963

## CONTENTS

| | PAGE | RUSS. PAGE |
|---|---|---|
| The Work of Industrial Laboratories Toward Technical Progress | 827 | 771 |
| METHODS OF CHEMICAL ANALYSIS | | |
| The Theoretical Bases of andInterrelations Between Electrometric Methods of Chemical Analysis (Review). P. K. Agasyan and E. R. Nikolaeva | 829 | 773 |
| The Determination of Copper in Various Objects by Means of 2,2'-Bicinochoninic Acid. I. S. Mustafin, N. S. Frumina, and V. S. Kovaleva | 838 | 782 |
| The Determination of Rhenium in Alloys by Means of Diphenylcarbazide. D. I. Ryabchikov and L. V. Borisova | 841 | 785 |
| The Fluorimetric Determination of Rhenium in Ores with Rhodamine 6J. A. I. Ivankova and D. P. Shcherbov | 843 | 787 |
| The Photometric Determination of Rhenium in Titanium Alloys by Means of 8-Mercaptoquinoline. K. I. Egorova and A. N. Gurevich | 845 | 789 |
| The Complexometric Determination of Molybdenum in Permalloy and Ferromolybdenum. V. D. Konkin and V. I. Zhikhareva | 847 | 791 |
| The Trilonometric Determination of Calcium Oxide in Slags Using Fluorexone. A. A. Fedorov, F. A. Ozerskaya, and E. N. Strebulaeva | 849 | 794 |
| The Determination of Germanium As a Complex Pyrocatechatogermanate. V. A. Nazarenko and A. M. Andrianov | 850 | 795 |
| The Selection of Conditions for Ashing Coal for Germanium Determination. M. A. Menkovskii and A. N. Aleksandrova | 853 | 797 |
| Polarographic Control of Nitroglycerol in Dilute Solutions Containing Nitric Acid and Sulfuric Acids. E. V. Khamskii and V. A. Il'ina | 855 | 799 |
| The Determination of Propylene Oxide in Its Hydration Products. N. G. Polyanskii and N. L. Potudina | 857 | 802 |
| EXCHANGE OF EXPERIENCE | | |
| The Photocolorimetric Determination of Cerium in Carbon Steels by Means of O-Tolidine. E. A. Nechaeva and T. M. Kholodkova | 859 | 803 |
| Extractive Photometric Determination of Copper in Alloys As An N-Acetylanabasine-Thiocyanate Complex. Sh. T. Talipov, K. G. Nigai, and É. L. Abramova | 860 | 804 |
| The Determination of Aluminum with Hydroxyquinoline in the Presence of Large Amounts of Uranium. A. V. Vinogradov and V. S. Shpinel' | 860 | 804 |
| Rapid Methods for the Analysis of Brown Coal Ash. V. I. Volokhova | 861 | 804 |
| A Rapid Method for Determining Germanium in Coal Tars and Pitches. K. P. Medvedev, L. M. Khar'kina, V. M. Petropol'skaya, and K. A. Nikitina | 862 | 805 |
| Spectrophotometric Determination of the Main Component in Commercial Urea. Yu. I. Mushkin and A. I. Finkel'shtein | 862 | 805 |
| The Determination of Nitrogen in the Nitrides of Boron and Silicon. S. V. Syavtsillo, A. M. Nikol'skaya, and T. E. Mashko | 863 | 806 |

# CONTENTS (continued)


| | PAGE | RUSS. PAGE |
|---|---|---|
| The Determination of Phenanthrene in Mixtures of Aromatic Hydrocarbons. V. M. Bednov, E. A. Sukhorukova, and V. N. Novikov | 864 | 806 |
| The Determination of Chlorine in Polychlorovinyl and Perchlorovinyl Resins by the Reduction Method. G. G. Petukhov and T. V. Guseva | 865 | 806 |
| **PHYSICAL METHODS OF INVESTIGATION** | | |
| Methods for Testing the Strength of Adhesive Joints (Review). Yu. I. Markin and S. S. Voyutskii | 867 | 808 |
| Experimental Determination of the Contrast in X-ray Images of Flaws. A. M. Yakobson and K. M. Dzhgalyan | 871 | 811 |
| Detection by the Thermal Etching Method of the Chemical Heterogeneity of Structural Components of Alloys. G. A. Falvilevich | 873 | 814 |
| The Investigation of the Kinetics of the Oxidation of Metals During Heating by the Method of Selective Coloring. E. I. Antipova and M. G. Lozinskii | 876 | 815 |
| The Exposure of the Microstructure of Some Ferrites. S. A. Eliseev | 879 | 817 |
| The Measurement of the Hardness of Strained Steel Articles by Coercive Methods. N. I. Noskova, V. D. Sadovskii, B. K. Sokolov, and G. S. Tomilov | 881 | 818 |
| The Use of Deposited Transmitters for Determining Residual Stresses in the Hardened Layer of Large Parts. B. A. Brusilovskii and F. I. Ivanov | 883 | 821 |
| Diffusion Method for Measurement of Hydrogen Concentration in Gas Mixtures. V. P. Ryabov | 886 | 824 |
| A Method for Obtaining X-ray Pictures from Materials Subject to Decomposition in Air. V. A. Kutsev, E. I. Smagina, and R. N. Morzheedova | 888 | 826 |
| **MATHEMATICAL METHODS OF INVESTIGATION** | | |
| Discussion of the Treatment of Results of Longevity Tests of Samples from Several Batches of a Metal | 889 | 827 |
| A Statistical Technique for Evaluating Fatigue Tests on Steel Structures. A. A. Bat' and A. I. Kochetov | 899 | 838 |
| The Use of the Distribution Theory of Extreme Values of a Sample in the Evaluation of Strength Tests. N. G. Lindtrop | 902 | 841 |
| The Use of Mathematical Statistics in Testing Radiometric Equipment. V. B. Luk'yanov, A. V. Makarov, and A. D. Fedin | 906 | 844 |
| Some Problems in the Documentation of Molecular Spectra by Punched Cards. V. T. Aleksanyan and Z. B. Barinova | 911 | 849 |
| **EXCHANGE OF EXPERIENCE** | | |
| A Fast Method of Calculating the Numerical Characteristics of a Series of Experimental Values A. M. Rostovtsev | 919 | 856 |
| **MECHANICAL METHODS OF TESTING** | | |
| A Technique for Fatigue Testing of Flat Fiber Glass Plastic Specimens in Pure Bending Under a Specified Moment. V. A. Bershtein and L. A. Glikman | 921 | 858 |
| A Method for Determining the Strength of Sheet Glass. F. F. Vitman and V. P. Pukh | 925 | 863 |
| The Determination of the Dynamic Characteristics of Polymers by the Resonance Method. Yu. V. Zelenev, G. M. Bartenev, and G. K. Demishev | 930 | 868 |
| The Long Term Shear Strength of Rubber-Metal Specimens. V. N. Shlyapina, L. E. Vinitskii, and G. G. Popov | 934 | 872 |
| Measurement of the Microhardness of Brittle Transparent Materials Under Load. Yu. S. Boyarskaya and M. I. Val'kovskaya | 936 | 874 |
| Technique and Equipment for Testing Ribbon-Shaped Materials for Pure Bending at Temperatures Up to 600°C. I. B. Kalachev | 938 | 876 |

# CONTENTS (continued)


| | PAGE | RUSS. PAGE |
|---|---|---|
| Obtaining Temperature Fields in Flat Models During Investigations by the Photothermoelasticity Method. V. I. Savchenko and T. Sh. Chernis | 941 | 879 |
| IN THE INDUSTRIAL LABORATORIES | | |
| The 20th Anniversary of the Central Chemical Laboratory of the Chelyabinsk Metallurgical Plant. M. O. Zakhavatkin | 944 | 881 |
| NEW LABORATORIES IN THE PLANTS | | |
| Automation Laboratory in the Novolipetsk Metallurgical Plant. N. A. Popov | 947 | 883 |
| The Use of Mathematical Statistics at the Orsko-Khalilov Metallurgical Combine. I. N. Varnavskii and A. Chubarev | 948 | 884 |
| Laboratory for Economics and Organization of Production. I. Lekht | 949 | 884 |
| EXPERIENCE OF FOREIGN LABORATORIES | | |
| The Laboratory of the Fiat Combine (Italy). A. A. Gol'denberg | 950 | 885 |
| ORGANIZATION OF LABORATORY WORK AND EXCHANGE OF IDEAS | | |
| Correction to the G. I. Pogodin-Alekseev Method on the Study of Properties of a Metal During Impact Bending. V. M. Chernyshev | 953 | 888 |
| The Indirect Determination of Silica in Blast-Furnace Slags. M. I. Shvaiger | 955 | 890 |
| INFORMATION | | |
| Machines for Friction and Wear Testing. B. L. Smushkovich and V. S. Golubkov | 956 | 890 |
| Automatic High Frequency Capacitive Conductivity Meter AVK-60-2. O. B. Andreev | 959 | 893 |
| All-Union Symposium on Radioactivity Analysis. Z. E. Gauer | 960 | 894 |
| "The Monte Carlo Method of Statistical Experimentation and Its Realization in Numerical Computing Machines." N. P. Buslenko and Yu. A. Shreider | 961 | 895 |
| "Organization of Scientific Research in the Industry of the USA" [in Russian]. Reviewed by T. A. Vvedenskii | 962 | 895 |
| INFORMATION FROM ABROAD | 963 | 896 |


## ERRATUM

Vol. 29, No. 3

| | Reads | Should read |
|---|---|---|
| Page 271, 3rd paragraph, first line | Thus atmosphere nitrogen could be responsible for saturation with nitrogen and formation of nitrogen. | Thus, atmospheric nitrogen could be responsible for saturation with nitrogen and formation of nitrides. |

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# Instruments and Experimental Techniques

*A translation of Pribory i Tekhnika Eksperimenta, a publication of the Academy of Sciences of the USSR*

(Russian Original Dated May-June, 1963)

1963, No. 3, pp. 371-588 November, 1963

## CONTENTS

| | PAGE | RUSS. PAGE |
|---|---|---|
| Photomultipliers in Automatic Control Schemes of Amplification (Review). L. V. Ksanfomaliti | 371 | 5 |
| Magnetic Quadrupole Lenses for Linear Accelerators with Drift Tubes. I. Requirements for the Lenses and Determination of the Shape of the Pole End-Pieces. I. M. Kapchinskii and V. K. Plotnikov | 381 | 15 |
| Magnetic Quadrupole Lenses for Linear Accelerators with Drift Tubes. II. Measurement of Field Nonlinearities in Lenses with Flat Poles. E. N. Danil'tsev and V. K. Plotnikov | 387 | 20 |
| A Study on a Model of a Recharging Electrostatic Generator. Yu. M. Khirnyi and L. N. Kochemasova | 393 | 25 |
| 5-MeV Linear Electron Accelerator (Model U-12). O. A. Val'dner, A. A. Glazkov, and A. I. Finogenov | 397 | 29 |
| Reading Channel of the Device for Measuring Coordinates on Photographs of Tracks. L. L. Likhtenbaum, B. N. Moiseev, and V. S. Kaftanov | 399 | 32 |
| Follow-Up Drive of the Device for Measuring Coordinates on Photographs of Tracks. B. I. Moiseev, V. I. Lyulevich, and O. P. Fedotov | 407 | 40 |
| Counter with Selective Efficiency for the Recording of Gamma-Rays Which are Emitted Without Recoil. K. P. Mitrofanov, N. V. Illarionova, and V. S. Shpinel' | 415 | 49 |
| Application of Cerenkov Threshold Counters for the Separation of $\pi$- and $\mu$-Mesons in Meson Beams. V. D. Bobrov, V. G. Varlamov, Yu. M. Grashin, B. A. Dolgoshein, V. G. Kirillov-Ugryumov, V. S. Roganov, and A. V. Samoilov | 421 | 55 |
| Multiwire Neutron Detector with An Overload-Free Preamplifier. S. S. Moskalev, Yu. V. Adamchuk, and S. K. Sotnikov | 424 | 58 |
| On The Track Width in Convection Chambers. N. G. Volkov, V. K. Lyapidevskii, and I. M. Obodovskii | 428 | 61 |
| Measurement of the Growth Rate of Bubbles in a Propane Chamber. Yu. A. Aleksandrov, G. S. Voronov, and N. B. Delone | 430 | 62 |
| Measurement of the Boundaries of the Radiation Sensitivity Zone for Propane. Yu. A. Aleksandrov and N. B. Delone | 433 | 64 |
| Automatic Device for Measuring the Radioactivity of Wire. M. P. Sokolov | 435 | 66 |
| A Multidimensional Data Analyzer. A. B. Ekatov, L. A. Matalin, V. F. Semenkov, V. I. Smirnov, S. E. Chubarov, and A. M. Shimanskii | 442 | 72 |
| An Electronic Pulse-Form Discriminator. A. A. Sanin and Yu. V. Mineev | 449 | 79 |
| A Stable One-Tube Integrator for Nuclear Radiation Monitors. O. B. Dem'yanovskii, E. M. Leikin, and K. I. Yablonin | 452 | 82 |
| A Method of Measuring Impulse Voltages. G. A. Ostroumov and A. A. Shteinberg | 455 | 85 |

# CONTENTS (continued)


| | PAGE | RUSS. PAGE |
|---|---|---|
| A Direct Current Measuring Amplifier. V. S. Verkhovtsev, V. Yu. Vorobkevich, M. A. Rakov, and L. A. Sinitskii | 460 | 89 |
| On the Measurement of the Input Resistance of Pulse-Operated Tubes. O. S. Kolotov | 463 | 93 |
| A Generator of Long Time Intervals and a Precision Timer. G. N. Muskhelishvili and Z. I. Bakhtadze | 467 | 97 |
| A Pulse Generator for Spin Echo Observation. O. F. Bezrukov and Yu. I. Neronov | 470 | 100 |
| A $10^{-14}$A Current Integrator Using the S-95 Electrostatic Voltmeter. V. V. Yakushin | 474 | 104 |
| Taumeter. P. A. Subbota-Mel'nik | 477 | 106 |
| Measuring Microwave Power with an Electron Beam Probe. B. G. Eremin and S. B. Mochenev | 479 | 108 |
| Energy Measuring Instrument for a High Power Electrical Discharge. V. V. Pedanov and G. A. Sinel'nikov-Murylev | 484 | 113 |
| Analytical Mass Spectrometer Using a Modulated Molecular Beam. G. D. Tantsyrev, G. V. Karpov, and V. L. Tal'roze | 489 | 118 |
| Measurement of the Mass Spectrum of Residual Gases by Means of Mass Spectrometers with High Resolving Power and Sensitivity. B. A. Mamyrin and B. N. Shustrov | 493 | 122 |
| Laboratory Ultrahigh-Vacuum Apparatus with Filamentary Solid-Phase Titanium Evaporators. A. A. Kuz'min | 497 | 126 |
| Fast Vacuum Slide Gate. O. V. Lavrov, N. D. Fedorov, and N. N. Khaldin | 502 | 131 |
| Katharometer Leak Detector. B. I. Apter | 505 | 133 |
| Synchronizing and Speed Control Systems for Raster Motion Picture Cameras Using A Mirror Scanner. A. M. Andreev, A. A. Bolotov, and A. A. Lukashev | 509 | 136 |
| Arrangement for Studying the Kinetics of Photoconductivity by the Supplementary Rectangular Pulse Method. E. A. Sal'kov | 512 | 140 |
| Obtaining Steady Magnetic Fields of a Prescribed Shape. A. A. Azatyan, G. V. Badalyan, and G. N. Eritsyan | 514 | 142 |
| Generation of Pulsed Magnetic Fields of Long Duration. V. E. Rode, A. V. Vedyaev, B. N. Krainov, and V. M. Talyzin | 519 | 146 |
| The KGU-MP230 Laboratory DC Magnet. A. L. Bil'dyukevich | 521 | 148 |
| A Differential Method for the Study of Relaxation Processes. L. G. Paritskii | 523 | 150 |
| Measurement of the Secondary Emission Coefficient of Dielectrics. V. S. Gorovets | 526 | 153 |
| Small-Angle Chamber with a Proportional X-ray Radiation Counter. D. A. Goganov, E. A. Porai-Koshits, and Yu. G. Sokolov | 528 | 155 |
| Laboratory Device for Compressing Liquids to 20 katm. L. D. Livshits and E. D. Martynov | 534 | 161 |
| Hydrogen Liquefiers with Efficient Heat Exchangers. E. S. Borovik, I. F. Mikhailov, and N. A. Kosik | 538 | 165 |
| Device for Studying Creep in Metals at Low Temperatures. I. A. Gindin, S. F. Kravchenko, Ya. D. Starodubov, and V. M. Godzhaev | 542 | 169 |
| Device for Studying the Damping of Low Frequency Torsional Oscillations. R. I. Garber, I. A. Gindin, V. M. Stolyarov, G. G. Chechel'nitskii, and L. A. Chirkina | 545 | 172 |
| Efficiency of Plastic Scintillators Based on Copolymers of Styrene with Paravinyltoluene. A. P. Kilimov and N. M. Grachev | 548 | 175 |
| Pulse Electron Gun for Controlling Beams with High Current Density. S. N. Treneva | 550 | 177 |
| Motor Driven Voltage Regulator for Autotransformers. G. E. Pletenetskii and S. A. Girka | 552 | 179 |
| Adjustable Dummy Load. V. I. Vishnevskii and Yu. A. Grits | 553 | 180 |
| Automatic Sweep for the Magnetic Field of a Type MI-1305 Mass Spectrometer. V. I. Zubkov and A. M. Ivanov | 555 | 182 |
| A Helically-Wound Cavity for EPR Spectrometers with High-Frequency Magnetic-Field Modulation. Yu. E. Pol'skii | 558 | 184 |
| Using a Photoelectrooptical Amplifier for Ballistic Measurements. F. A. Charnaya | 560 | 186 |

# CONTENTS (continued)


| | PAGE | RUSS. PAGE |
|---|---|---|
| Measuring the Transmission Time through a Photoelectron Multiplier. A. Yu. Borisov | 561 | 187 |
| Calorimeter for Measuring the Radiation Energy of Optical Quantum Generators. V. S. Zuev and P. G. Kryukov | 563 | 188 |
| Adapter to the PRS Device for Investigating the Luminescence of Cathodoluminophors. Yu. V. Voronov and A. G. Ovchinnikov | 565 | 190 |
| A Simplified Photoelectric Fluorometer. V. N. Smorchkov and A. N. Nikitina | 567 | 192 |
| Photoelectronic Device for Measuring the Thickness of Thin Films. V. D. Perevertaev, V. M. Kupriyanov, and M. S. Metsik | 568 | 193 |
| Device for Imparting Vibrations to Crystals Pulled from the Melt. G. V. Nikitina, A. I. Podya, and V. N. Romanenko | 571 | 196 |
| Crystal Holder for Investigations Under High Pressures. G. G. Leonidova | 573 | 198 |
| A Simple Adsorption Gas Analyzer. V. E. Keilin | 574 | 199 |
| Evaporability of Liquid Hydrogen Stored in SD-10G Vessels. I. Yu. Shebalin | 576 | 201 |
| A Capacitor Liquid Helium Level Indicator Using a Transistor. Ya. I. Rozenberg and V. G. Kasatkin | 578 | 203 |
| Resistance of Carbon Thermometers as a Function of Temperature. I. N. Kalinkina | 580 | 204 |
| A Device for Local Cooling. A. I. Shal'nikov | 582 | 205 |
| NEW INSTRUMENTS | | |
| Apparatus for Measuring Pressure Pulses | 584 | 207 |
| Device for Measuring the Thermoelectric Parameters of Semiconductor Materials | 585 | 208 |

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# Measurement Techniques

*A translation of Izmeritel'naya Tekhnika, a publication of the Academy of Sciences of the USSR*

(Russian Original Dated July, 1963)

1963, No. 7, pp. 539-630 December, 1963

## CONTENTS

| | PAGE | RUSS. PAGE |
|---|---|---|
| New Stage in the Development of Metrology and Standardization in Instrument-Making. A. I. Ivlev | 539 | 1 |
| LINEAR MEASUREMENTS | | |
| Cathetometer KM-8. F. M. Danilevich and V. A. Nikitin | 544 | 5 |
| Instrument for Measuring Internal Threads. V. I. Shagun and É. I. Fel'dshtein | 547 | 7 |
| MPB-2 Measuring Microscope Testing. N. V. Sergeev | 551 | 11 |
| Universal Device for Testing Indicating and Hole Gauges. A. I. Yuferev | 551 | 11 |
| MEASUREMENT OF MASS | | |
| Determination of the Optimum Scale Factors and Variations in the Readings of Scales. S. I. Toropin | 553 | 11 |
| ELECTRICAL MEASUREMENTS | | |
| Information Characteristics of Electrical Measuring Instruments. B. M. Pushnoi | 557 | 14 |
| Evaluating the Efficiency of Automatic Control Systems. L. G. Dubitskii | 561 | 17 |
| Main Features of Digital Measuring Instruments. Yu. A. Popov | 567 | 20 |
| Determining Errors in Digital Instruments with Digit-by-Digit Balancing. V. P. Kotel'nikov | 570 | 23 |
| Frequency-Subtracting Circuits for Frequency to Digit Converting Instruments. V. G. Knorring | 573 | 25 |
| Special Digital Voltmeter. N. I. Gorelikov, I. F. Klistorin, G. G. Matushkin, and V. G. Strukov | 579 | 30 |
| New Design Method for Electrostatic Digital Voltmeters. A. N. Gutorova | 581 | 32 |
| Double-Coil Ferrodynamic Ratiometer Used as a Phase Null Detector. A. F. Kotyuk | 584 | 35 |
| HIGH AND ULTRAHIGH FREQUENCY MEASUREMENTS | | |
| Set of High-Frequency Permeameters for Determining the Permeability and Loss Angle of Ferromagnetic Materials. A. L. Grokhol'skii and A. F. Kugaevskii | 586 | 36 |
| Effect of Oscillator Harmonics on the Precision of Measuring the Voltage Standing Wave Ratio by Means of Measuring Lines. V. P. Petrov | 588 | 38 |
| Waveguide Version for Applying An $H_{01}$ Wave in Measuring Parameters of High-Loss Dielectrics. E. B. Zal'tsman | 590 | 39 |
| LIQUID AND GAS FLOW MEASUREMENTS | | |
| Selecting a Type of Ultrasonic Flowmeter for Polluted Liquids and Pulps. G. I. Birger | 593 | 41 |
| Vibration of Gas in Pipes and Measurement of Its Flow. S. I. Sergeev | 596 | 43 |
| Practical Method for Calibrating Rotameters. L. L. Boshnyak | 599 | 46 |
| RADIATION MEASUREMENTS | | |
| Volt-Ampere Characteristics of a Plane-Parallel Ionization Chamber. V. S. Shevyrev and A. B. Dmitriev | 605 | 50 |
| Problem of Classifying Relay Devices with Nuclear Radiation Sources. A. G. Vasil'ev, I. S. Zhitomirskii, and K. S. Klempner | 609 | 53 |

# CONTENTS (continued)


| | PAGE | RUSS. PAGE |
|---|---|---|
| REVIEWS AND REPORTS | | |
| Opticomechanical Instruments for Controlling the Linearity and Coaxiality of Large-Size Products. É. I. Rozenberg | 614 | 57 |
| INFORMATION | | |
| Conference on Interchangeability, Precision and Control Methods in Engineering. É. I. R. | 617 | 59 |
| ADVICE | 619 | 60 |
| STATE COMMITTEE OF STANDARDS, MEASURES AND MEASURING INSTRUMENTS OF THE USSR | | |
| Measures and Measuring Instruments Which Have Passed State Tests and Have Been Granted Temporary Production Rights. | 624 | 63 |
| New Instructions for Testing Measures and Measuring Instruments | 626 | 64 |

## TABLE OF CONTENTS


| | Page Number English | Russian |
|---|---|---|
| FORTY-FIFTH ANNIVERSARY OF THE GREAT OCTOBER SOCIALIST REVOLUTION | 449 | 2 |
| **FERROUS METALS AND ALLOYS** | | |
| YU.A. SKAKOV and T'IEN SHU-SEN. Mosaic Structure of Aluminum | 453 | 10 |
| B.D. GALATSKIY and I.N. FRIDLYANDER. Determining the Duration of Heating Prior to Quenching for Pressed Duraluminum Parts | 455 | 13 |
| M.G. LOZINSKIY and YE.I. ANTIPOVA. Characteristic Features of Structure of Nickel at High Temperatures | 458 | 18 |
| S.S. GORELIK, YU.N. VAYNBLAT and E.A. MALYSHEVA. Part Played by Zonal Stresses in Formation of Macrocrystalline Ferrule When Extruded Aluminum Alloys are Heated Prior to Quenching | 462 | 21 |
| YE.I. SHILOVA and O.G. NIKITAYEVA. Mechanical Properties of Sheeting Made of D16 Alloys When Heated | 463 | 23 |
| M.YE. DRITS, Z.A. SVIDERSKAYA, E.S. KADANER and S.V. FEL'GINA. Effect of Manganese, Aluminum and Calcium on Recrystallization of Magnesium | 466 | 28 |
| V.A. KOGAN and A.A. SEMIONOV. Shrinkage of Lead-Rich Alloys in Lead-Antimony-Tin System | 468 | 31 |
| **HEAT-SHOP EQUIPMENT** | | |
| A.M. GRISSIK and L.G.SATANOVSKIY. Heat-Shop Equipment Standardized Open-Flame Furnaces | 471 | 36 |
| YU.M. BRUNZEL', Z.L. REGIRER, B.I. SVET and V.A. PUCHKOV. Automatic Control of Carbon Potential During Gas Cementation | 474 | 41 |
| **FROM EXHIBITION OF ACHIEVEMENTS OF THE NATIONAL ECONOMY** | | |
| Aggregate for Heat Treating Railroad Bearing Rings and Rollers for Use in Automatic 1GPZ line. | 476 | 45 |
| **TECHNICAL INFORMATION** | | |
| V.A. KASHCHUK. Effect of Cobalt on Some of the Properties of Cast High-Vanadium High-Speed Steel | 481 | 53 |
| **FOREIGN ENGINEERING** | | |
| Modifying Steel With Nitrides | 483 | 55 |
| **ANSWERS TO READERS' LETTERS** | | |
| B.G. GOL'DSHTEYN. Quenching Fused Salts at 110-125° | 488 | 62 |
| New Books | 490 | 65 |
| **CONSTRUCTION STEELS** | | |
| A.P. GULYAYEV. Effect of Chromium and Nickel on Toughness of Steel | 491 | 2 |
| O.N. MESHCHERINOVA. Effect of Nickel and Boron on Properties on 40Kh Steel | 494 | 6 |
| YA.YE. GOL'DSHTEYN and G.A. CHARUSHNIKOVA. Effect of Nickel on Cold Shortness of Steel | 497 | 12 |
| From the Editors | 499 | 14 |
| N.N. KACHANOV, The Effect of Certain Factors on Hardenability of ShKh 15 Steel | 499 | 15 |
| **PRECISION ALLOYS** | | |
| I.N. GOLIKOV and B.V. MOLOTILOV. Domain Structure and Dislocation Structure of Transformer Steel | 503 | 21 |
| M.P. RAVDEL' and O.I. YEVDOKIMOVA. Martensite Transformations in Manganese-Base Alloys | 505 | 23 |
| N.M. LAPOTYSHKIN, L.V. MIRONOV et al. Structure of Cold-Rolled Transformer Steel | 507 | 26 |
| **CORROSION OF METALS** | | |
| A.V. RYABCHENKOV, V.I. VELEMITSYNA and L.D. ZAMOSHNIKOV. Use of Chemical Nickel Impregnation in Turbine Construction for Pearlitic Steel Parts | 509 | 30 |
| S.A. VISHENKOV, et al. Chemical Nickel Plating of Soldered Aluminum Parts | 511 | 33 |
| N.G. PEDAN. Local Protection of Steel 38KhMYuA From Nitriding by Chemical Nickel Plating | 513 | 36 |
| A.NEDESHAN, et al. Improving Fatigue Resistance by Electrolytic Plating with Iron-Nickel Alloy | 514 | 37 |
| G.A. KUSMIRSKAYA. Stressed State of Electroplated Layer | 516 | 40 |
| E.I. ANTONOVSKAYA. Intercrystallite Corrrosion in Kh18N9T Steel Welds | 518 | 43 |
| **TECHNICAL INFORMATION** | | |
| S.S. GORELIK, et al. Press Effect in Avial Parts | 521 | 48 |
| N.N. NOGTEV and YU. N.RAGOZIN. Electrolytic Boriding in Boric Anhydride | 523 | 49 |
| D.A. SMOLYARENKO and A.I. BOCHKAREVA. New Materials in Ferrous Metallurgy | 523 | 50 |
| Exhibition of Achievements of the National Economy | 526 | 53 |
| All-Purpose High-Frequency Quenching Unit MGZ (AK or AB) | 527 | 55 |
| **NEWS ITEMS** | | |
| First Seminar Held by UKrSSR Academy of Sciences (Technical Sciences Section) on Surface Diffusion Saturation of Metals | 529 | 56 |
| Letter to the Editors of "Metallurgy and Heat Treatment of Metals" | 530 | 58 |
| Pyotr Pavlovich Petrosyan | 532 | 60 |

Soviet Physics

# CRYSTALLOGRAPHY

*A Translation of the Journal "Kristallografiya"*

(Russian Original Vol. 8, No. 3, pp. 307-496, May-June, 1963)

Vol. 8, No. 3, pp. 241-400 November-December, 1963

## CONTENTS


| | | PAGE | RUSS. PAGE |
|---|---|---|---|
| Symmetry Groups and Groups of the Various Kinds of Antisymmetry. A. M. Zamorzaev | (T) | 241 | 307 |
| Crystal Structures with and without Dipoles. V. N. Lyubimov and I. S. Zheludev | (T) | 246 | 313 |
| Polar-Polar and Polar-Neutral Crystal Structures. V. A. Koptsik | (T) | 249 | 319 |
| Characteristics of the Structural Changes Involved in Phase Transformations in Antiferroelectrics. I. S. Zheludev and V. N. Lyubimov | (T) | 255 | 328 |
| Effects of Spin-Phonon Interaction in a Ferromagnetic on the Debye-Waller Factor. V. N. Kashcheev | (T) | 259 | 333 |
| Representation of X-ray Atomic Scattering Factors in Polynomial Form. F. A. Brusentsev | (E/T) | 263 | 338 |
| The Structure Group of Quartz. N. L. Smirnova and N. V. Belov | (T/E) | 270 | 346 |
| An X-ray Study of Some Compounds of Composition $A(B'_x, B''_{2-x})O_6$, $(A'_{0.8}, A''_{0.4})Nb_2O_6$ and $(Ba_{0.4}Sr_{0.2}, Ca_{0.4})TiO_3$ (A = Sr, Ba; B' = Fe, Mg; B'' = Nb, A' = K; A'' = La, Bi). I. G. Ismailzade | (E) | 274 | 351 |
| An X-ray Study of Small Distortions of Complex Perovskites. M. F. Kupriyanov and V. S. Filip'ev | (E) | 278 | 356 |
| New Data from an X-ray Study of Phase Transformations in Sodium Niobate. I. G. Ismailzade | (E) | 284 | 363 |
| Crystal Structure of *l*-Phenylalanine Hydrochloride. Derivation of a Model of the Structure. G. V. Gurskaya and B. K. Vainshtein | (T/E) | 288 | 368 |
| Statistical Derivation of a Model for the Structure of 3,3'-Diethylthiocarbocyanin Chloride. L. G. Vorontsova, Z. V. Zvonkova, and G. S. Zhdanov | (E) | 292 | 374 |
| The Structure of CdTe Layers Sublimated onto the Natural Cleavage Surface of NaCl, KCl, and KBr Single Crystals. F. T. Novik, M. A. Rumsh, and T. M. Zimkina | (E/T) | 295 | 378 |
| Determination of the Position of Carbon in Cementite by the Neutron Diffraction Method. B. G. Lyashchenko and L. M. Sorokin | (T/E) | 300 | 382 |
| The Position of Hydrogen Atoms in Natrolite. S. P. Gabuda, A. G. Lundin, G. M. Mikhailov, and K. S. Aleksandrov | (T/E) | 305 | 388 |
| Mutual Solubility of Tolane and Mercury Diphenyl in the Solid State. A. I. Kitaigorodskii, R. M. Myasnikova, and V. D. Samarskaya | (E/T) | 308 | 393 |
| An Approximate Theory of Quasi-Longitudinal Waves in Crystals. F. I. Fedorov | (T) | 312 | 398 |


(continued)

# CONTENTS (continued)


| | PAGE | RUSS. PAGE |
|---|---|---|
| Study of Dislocation Structure and Dislocation Multiplication in Cadmium Crystals. N. A. Tyapunina, A. A. Predvoditelev, G. K. Martynyuk, and E. G. Shvidkovskii. . (T/E) | 316 | 405 |
| Dislocation Interaction in Calcite Twinning. V. Z. Bengus . . . . . (E/T) | 322 | 413 |
| Mechanisms of Growth of Ionic Filament Crystals from Solutions. G. V. Berezhkova and V. N. Rozhanskii . . . . . (E/T) | 327 | 420 |
| Study of the Surface Structure of Filamentary Iron Crystals. Yu. D. Tropin . . . . . (E/T) | 332 | 427 |
| Face Morphology of Crystals of Yttrium-Iron Garnet. S. Sh. Gendelev . . . . . (T/E) | 335 | 431 |
| Growth of Monocrystals of Germanium-Silicon Alloys by the Vertical Recrystallization Zone Method. N. V. Zhimskaya, Z. I. Kir'yashkina, and V. A. Maslov . . . . . (E) | 340 | 437 |
| An Automatic X-ray Diffractometer with Point Counting and Programmed Operation for the Study of Polycrystalline Samples. É. L. Lube and D. M. Kheiker . . . . . (E) | 343 | 440 |
| BRIEF COMMUNICATIONS | | |
| The Influence of the Temperature Correction on the Reliability Coefficient in Crystal Structure Analysis. A. V. Nikitin and V. I. Simonov . . . . . (T/E) | 347 | 446 |
| The Crystal Structures of Beryllium-Rich Compounds in the Systems Mo – Be and W – Be. P. I. Kripyakevich and E. I. Gladyshevskii . . . . . (E) | 349 | 449 |
| Yttrium Beryllide and Compounds of the Type $ABe_{13}$. N. N. Matyushenko and G. F. Tikhinskii . . . . . (E) | 351 | 451 |
| The Structures of Compounds of Composition AB of Rare Earth Metals with Antimony and Bismuth. R. N. Kuz'min and S. V. Nikitina . . . . . (E) | 354 | 453 |
| Concerning the Problem of the Transition Region between the Ferroelectric and the Paraelectric Phases of (Pb, Ba) (Ti, Zr)$O_3$ Solid Solutions. S. A. Fedulov and Yu. N. Venevtsev . . . . . (E) | 355 | 454 |
| Electron Diffraction Study of the Structure of Sublimated Layers of ZnS and ZnS–Mn. S. A. Kostylev and B. N. Sherstyak . . . . . (E) | 357 | 456 |
| Electron Diffraction Study of the Structure of Monocrystalline Films of Cadmium Selenide. I. P. Kalinkin, L. A. Sergeeva, V. B. Aleskovskii, and L. P. Strakhov . . . . . (E) | 360 | 459 |
| The Crystal Structure of Films of Zinc Sulfide. K. V. Shalimova, N. K. Morozova, and V. S. Soldatov . . . . . (E) | 362 | 461 |
| Diffuse and Double Bragg Reflection by Polycrystalline Copper. V. I. Iveronova and A. A. Katsnel'son . . . . . (E) | 364 | 463 |
| A Fourier Spectrometer with Filters. B. N. Grechushnikov, G. I. Distler, and I. P. Petrov . (T/E) | 367 | 465 |
| Fourier Spectrometer for Working in the Near-Infrared Region of the Spectrum. B. N. Grechushnikov, G. I. Distler, and I. P. Petrov . . . . . (E) | 369 | 468 |
| Self-Excitation of a Plane Parallel Anisotropic Layer in the Presence of Total Reflection. N. S. Petrov, A. M. Goncharenko, and B. A. Sotskii . . . . . (T) | 372 | 471 |
| Dependence of the Velocity of Ultrasound on the Temperature in Monocrystals of PbSe in the Range 80-640°K. A. A. Chudinov . . . . . (E) | 374 | 473 |
| The Effect of Electrical Purification on the Decrease in Damping of Quartz. A. G. Smagin and V. I. Nikol'skaya . . . . . (E) | 375 | 475 |
| The Structural Relationships between the Metal and Its Oxide during the Oxidation of Titanium. D. I. Lainer, M. I. Tsypin, and A. S. Bai . . . . . (E) | 377 | 477 |
| Crystallization of Cassiterite ($SnO_2$) under Hydrothermal Conditions. I. P. Kuz'mina and B. N. Litvin . . . . . (E) | 379 | 478 |
| Optical Orientation of Crystalline Layers with Inclined Cross Sections. N. M. Melankholin . . . . . (E) | 381 | 480 |
| Linear Electrooptical Effect in Crystals of Hexamethylenetetramine (Urotropine), $C_6H_{12}N_4$. L. M. Belyaev, O. G. Blokh, A. B. Gil'varg, G. F. Dobrzhanskii, G. B. Netesov, V. A. Shamburov, and L. A. Shuvalov . . . . . (E) | 383 | 482 |

# CONTENTS (continued)


| | PAGE | RUSS. PAGE |
|---|---|---|
| DISCUSSION | | |
| The Relation between the Width of Diffraction Maxima and Crystal Sizes. P. A. Bezirganyan and Zh. O. Ninoyan. . . . . (T) | 385 | 484 |
| Use of the Fourier Transforms of Approximating Functions in the X-ray Analysis of the Fine Crystal Structure of Polycrystals. V. D. Krylov . . . . . (T/E) | 387 | 486 |
| The Problem of Determining the Particle Size and the Microdeformation in a Crystal Lattice from the Data on the Harmonic Analysis of the Shape of the X-ray Diffraction Lines. B. Ya. Pines and I. Ya. Surovtsev. . . . . (T/E) | 390 | 489 |
| The Method and Precision of the Harmonic Analysis of the Shape of Interference Lines. R. V. Kovalenok and I. V. Smushkov . . . . . (T) | 394 | 494 |

SOVIET PHYSICS JETP VOLUME 17, NUMBER 6 DECEMBER, 1963

## CONTENTS


| | Page | Russian Reference |
|---|---|---|
| The (p, α) Reaction at 20 MeV . A. P. Klyucharev, G. E. Krivets, and N. Ya. Rutkevich . | 1175 | 44, 1753 |
| Production of Strong Shock Waves During Electrical Discharges in Gaps . . . A. E. Voĭtenko and I. Sh. Model' | 1180 | 44, 1760 |
| Elastic Scattering of Deuterons by Chromium and Zinc Isotopes . . . A. K. Val'ter, A. P. Klyucharev, O. F. Nemets, and V. V. Tokarevskiĭ | 1183 | 44, 1765 |
| Ratio of the Cross Sections for the Production of the Isomer and Ground State of Nuclei in the (p, n) Reaction at Energies from the Threshold to 20 MeV . . . V. J. Gritsyna, A. P. Klyucharev, V. V. Remaev, and L. N. Reshetova | 1186 | 44, 1770 |
| Electrical Discharge in a Supersonic Air Flow . . . V. I. Alferov and A. S. Bushmin | 1190 | 44, 1775 |
| Determination of the Size of Nuclei from the Differential $\pi^6$-Meson Photoproduction Cross Sections . . . B. B. Govorkov, S. P. Denisov, and E. V. Minarik | 1195 | 44, 1780 |
| Angular and Energy Distributions of Photoneutrons from Bismuth, Gold, and Tantalum . . . G. N. Zatsepina, V. V. Igonin, L. E. Lazareva, and A. I. Lepestkin | 1200 | 44, 1787 |
| Search for Secondary Deuterium and Tritium Capture Reactions . . . Wang Ch'uan-P'eng, V. N. Melchedov, V. N. Rybackov, and R. A. Shimchak | 1208 | 44, 1800 |
| Nuclear-Active Particle Spectrum at 3260 m Above Sea Level . . . N. L. Grigorov, I. N. Erofeeva, V. S. Murzin, L. G. Mishchenko, I. D. Rapoport, B. O. Rostomyan, V. A. Sobinyakov, and A. F. Titenkov | 1213 | 44, 1806 |
| Resonance Scattering of γ Quanta on $Cu^{65}$ and $Ti^{46}$ . . . D. K. Kaipov, R. B. Begzhanov, A. V. Kuz'minov, and Yu. K. Shubnyĭ | 1217 | 44, 1811 |
| Electron Capture and Loss on Passage of Fast Atoms Through Molecular Gases . . . D. V. Pilipenko and Ya. M. Fogel' | 1222 | 44, 1818 |
| Two-Electron Charge Exchange of Low-Energy Protons . . . V. F. Kozlov, Ya. M. Fogel', and V. A. Stratienko | 1226 | 44, 1823 |
| Magnetic Properties of a Single Crystal of Scandium . . . V. I. Cherchernikov, Iuliu Pop, and O. P. Naumkin | 1228 | 44, 1826 |
| Ground State of the $Be^6$ Nucleus . . . M. Gulyamov, B. V. Rybakov, and V. A. Sidorov | 1230 | 44, 1829 |
| Ternary Fission of Plutonium . . . N. A. Perfilov, Z. I. Solov'eva, R. A. Filov, and G. I. Khlebnikov | 1232 | 44, 1832 |
| Diagram of State for $He^3$–$He^4$ Solutions: Phase Stratification and Solidification Curves . . . K. N. Zinov'eva | 1235 | 44, 1837 |
| Coherence and Time Scanning of the Emission Spectra of a Ruby Laser . . . V. V. Korobkin and A. M. Leontovich | 1242 | 44, 1847 |
| Formation of Helium Mesic Atoms in a Hydrogen-Helium Gas Mixture . . . O. A. Zaĭmidoroga, M. M. Kulyukin, R. M. Sulyaev, A. I. Filippov, V. M. Tsupko-Sitnikov, and Yu. A. Shcherbakov | 1246 | 44, 1852 |
| Temperature Dependence of the Spin-Lattice Relaxation Time of $V^{4+}$ in $TiO_2$ . . . G. M. Zverev | 1251 | 44, 1859 |
| The Ionization-Momentum Relation for Various Particles in the Relativistic Region . . . K. I. Alekseeva, G. B. Zhdanov, M. I. Tret'yakova, and M. N. Shcherbakova | 1254 | 44, 1864 |
| Emission of $Li^8$ Fragments in the Disintegration of Ag and Br Nuclei by 19-BeV Protons . . . N. P. Bogachev, A. G. Volod'ko, E. L. Grigor'ev, and Yu. P. Merekov | 1257 | 44, 1869 |
| The Isotope Effect in the Magnitude of the Unit-Cell Volumes of Nitrogen Isotopes . . . V. S. Kogan and T. G. Omarov | 1260 | 44, 1873 |
| Investigation of the Effect of High Pressure on the Superconducting Properties of Cadmium . . . N. B. Brandt and N. I. Ginzburg | 1262 | 44, 1876 |
| Operation of a Four-Level Optical Generator . . . Yu. A. Anan'ev, V. F. Egorova, A. A. Mak, D. S. Prilezhaev, and B. M. Sedov | 1268 | 44, 1884 |
| Resonance Absorption of Gamma Quanta in Barium, Strontium, and Calcium Stannate . . . Pham Zuy Hien, V. S. Shpinel', A. S. Viskov, and Yu. N. Venevtsev | 1271 | 44, 1889 |
| Concerning One Model of ππ Interaction . . . A. A. Afonin and Ya. I. Granovskiĭ | 1276 | 44, 1896 |
| Application of the Method of Majorization of Feynman Diagrams for Proving the Dispersion Relations . . . M. A. Mestvirishvili | 1279 | 44, 1901 |
| On the Relations Among Different Methods for Describing the Interaction of High-Energy Particles . . . I. I. Roĭzen and D. S. Chernavskiĭ | 1283 | 44, 1907 |
| Time Correlations of Quantities Described by the Kinetic Equations . . . V. M. Faĭn | 1289 | 44, 1915 |
| Instability Theory for a Low-Pressure Inhomogeneous Plasma in a Strong Magnetic Field . . . A. A. Galeev | 1292 | 44, 1920 |
| Theory of Electron Spectra of Bismuth Type Metals in a Magnetic Field . . . L. A. Falkovskiĭ | 1302 | 44, 1935 |
| Covariant Conservation Laws in the General Theory of Relativity . . . D. E. Burlankov | 1306 | 44, 1941 |

## CONTENTS–continued


| | Page | Russian Reference |
|---|---|---|
| Determination of the Fission Threshold from Experiments on the (d, pf) and (γ, f) Reactions . . . I. N. Usachev, V. A. Pavlinchuk, and N. S. Rabotnov | 1312 | 44, 1950 |
| Oscillations of a Low Pressure Inhomogeneous Plasma . . . L. M. Kovrizhnykh, A. A. Rukhadze, and V. P. Silin | 1314 | 44, 1953 |
| Galvanomagnetic Effects in Graphite and the Deformation of the Electron Spectrum of Graphite Under Pressure . . R. G. Arkhipov, V. V. Kechin, A. I. Likhter, and Yu. A. Pospelov | 1321 | 44, 1964 |
| Behavior of Cross Sections Near Threshold of a New Reaction in the Case of a Coulomb Attraction Field . . . M. Gaĭlitis | 1328 | 44, 1974 |
| Invariant Parametrization of Local Operators . . . A. A. Cheshkov and Yu. M. Shirokov | 1333 | 44, 1982 |
| Anomalous Plasma Diffusion Caused by Oscillations . . . V. I. Petviashvili | 1340 | 44, 1993 |
| Moments of Inertia of Beta and Gamma Vibrational Bands . . . I. M. Pavlichenkov | 1345 | 44, 2001 |
| The Definition of the Symmetry Group of a Quantum System. The Anisotropic Oscillator . . . Yu. N. Demkov | 1349 | 44, 2007 |
| Theoretical Determination of the Sign of the Mass Difference Between the $K_1^0$ and $K_2^0$ Mesons . . . S. G. Matinyan | 1352 | 44, 2011 |
| The Kinetics of Induced Mossbauer Radiation . . . B. V. Chirikov | 1355 | 44, 2016 |
| The Contribution of Strong Interactions to the Photon Green's Function . V. G. Pivovarov | 1360 | 44, 2023 |
| Shifts and Broadening of Energy Levels of Single-Electron Atoms and Ions in a High-Temperature Plasma . . . L. E. Pargamanik and G. M. Pyatigorskiĭ | 1365 | 44, 2029 |
| Dielectric Constant of Bismuth-Type Metals in the Infrared Region . . . A. A. Abrikosov | 1372 | 44, 2039 |
| Sound in Liquid Helium II Near Absolute Zero . . . A. Andreev and I. Khalatnikov | 1384 | 44, 2058 |
| Regge Poles in Quasiclassical Potential Well Problems . . . A. Z. Patashinskiĭ, V. L. Pokrovskiĭ and I. M. Khalatnikov | 1387 | 44, 2062 |
| Limitations on the Asymptotic Values of Cross Sections Imposed by the Regge Pole Hypothesis . . . I. B. Khriplovich | 1398 | 44, 2079 |
| Radiation Corrections to Scalar Meson Pair Production in Electron-Positron Collisions . . . V. V. Sokolov | 1400 | 44, 2081 |
| On the Charged Vector Theory of Lee and Yang . . . A. D. Sukhanov | 1404 | 44, 2087 |
| Direct Nuclear Reactions and Interaction in Initial and Final States . . . V. A. Kaminskiĭ and Yu. V. Orlov | 1406 | 44, 2090 |
| The Compton Effect on Relativistic Electrons and the Possibility of Producing Beams of Hard γ Rays . . . F. P. Arutyunyan and V. A. Tumanyan | 1412 | 44, 2100 |
| Allowance for the Effect of Pressure in the Theory of Second-Order Phase Transitions (with Application to the Case of Superconductivity) . . . V. L. Ginzburg | 1415 | 44, 2104 |
| Construction of a Local Quantum Field Theory Without Ultraviolet Divergences . . . G. V. Efimov | 1417 | 44, 2107 |
| Stability of Rotation of a Superfluid Liquid . . . Yu. G. Mamaladze | 1424 | 44, 2118 |
| Hollow Superconductions in a Magnetic Field . . . Hsü Lung-Tao and G. F. Zharkov | 1426 | 44, 2122 |
| The Theory of the Acoustoelectric Effect . . . V. L. Gurevich and A. L. Éfros | 1432 | 44, 2131 |
| Atomic Photoeffect at High Energies . . . V. G. Gorshkov and A. I. Mikhaĭlov | 1439 | 44, 2142 |
| Electrical Conductivity and Galvanomagnetic Coefficients of Semimetals and Degenerate Semiconductors in a Strong Electric Field . . . L. E. Gurevich and I. Ya. Korenblit | 1444 | 44, 2150 |
| Random Force Method in Turbulence Theory . . . E. A. Novikov | 1449 | 44, 2159 |
| Classical Models of a Charged Particle with Angular Momentum . . . A. S. Kompaneets | 1455 | 44, 2169 |
| Matrix Structure of the Meson-Photon, Nucleon-Photon, and Photon-Photon Scattering Amplitudes at High Energies . . . V. D. Mur | 1458 | 44, 2173 |


## LETTERS TO THE EDITOR


| | | |
|---|---|---|
| The Effects of a Laser Beam in a Liquid . . . G. A. Askar'yan, A. M. Prokhorov, G. F. Chantuviya, and G. P. Shipulo | 1463 | 44, 2180 |
| Abrupt Change in Probability of the Mössbauer Effect at the Phase Transition in Ferroelectrics . . . Pham Zuy Hien, A. S. Viskov, V. S. Shpinel', and Yu. N. Venevtsev | 1465 | 44, 2182 |
| Contribution of Regge Poles to the Total Cross Sections at High Energies . . . V. I. Nikanorov | 1466 | 44, 2184 |
| Some Methods for Polarization and Analysis of Polarization of Intermediate Energy Neutrons . . . Yu. V. Toran and F. L. Shapiro | 1467 | 44, 2185 |
| Direct Measurements of the Linear Flow Rate of a HEII Film . . . B. N. Esel'son, Yu. Z. Kovdrya, and B. G. Lazarev | 1469 | 44, 2187 |
| Standing Magnetoplasma Waves in Bismuth Single Crystals . . . M. S. Khaĭkin V. S. Édel'man, and R. T. Mina | 1470 | 44, 2190 |
| The Use of a Laser in the Investigation of the Combination Scattering Spectra of Colored Powders . . . G. E. Danil'tseva, V. A. Zubov, M. M. Sushchinskiĭ, and I. K. Shuvalov | 1473 | 44, 2193 |
| Correction to the Article "Scattering of Electrons by Electrons at High Energies and the Dipole Structure of the Electron" (JETP 42, 1103, 1962, Soviet Phys. JETP 15, 762, (1962) . . . E. M. Epshtein | 1474 | 44, 2194 |
| Analytical Subject Index | 1475 | 44, 2225 |
| Author Index | 1484 | 44, 2213 |
| Errata | 1510 | |

## CONTENTS

Principle of averaging for parabolic and elliptic differential equations and for Markov processes with small diffusion ..... R. Z. KHAS'MINSKII 1

On optimum methods in quickest detection problems ..... A. N. SHIRYAEV 22

Asymptotic optimality of group and systematic codes for some channels R. L. DOBRUSHIN 47

## SHORT COMMUNICATIONS

A limit theorem for homogeneous Markov chains ..... A. V. SKOROKHOD 61

The law of large numbers for D[0,1]-valued random variables.. R. RANGA RAO 70

Diffusion processes with reflection and problems with a directional derivative on a manifold with a boundary ..... M. I. FREIDLIN 75

A central limit theorem for a class of dependent random variables I. A. IBRAGIMOV 83

Continuous planning of regression experiments, I..... S. N. SOKOLOV 89

Statistical investigation of Russian dolnik trimeter..... M. L. GASPAROV 96

Analytic properties of a generating function for the number of renewals YU. K. BELYAEV and V. M. MAKSIMOV 102

Report on the All-Union Colloquium on Limit Theorems of Probability Theory 105

*Printed for the Society for Industrial and Applied Mathematics by*
*N.V. Erven P. Noordhoff's Uitgeversmaak, Groningen, The Netherlands*

# AUTHOR INDEX


| Author | Page |
|---|---|
| Abdullaev, G. B. | 263 |
| Abramov, G. A. | 222 |
| Adonia, A. I. | 223 |
| Afanas'ev, A. | 237 |
| Afanas'ev, S. A. | 268 |
| Afanas'eva, E. | 204 |
| Agranat, V. Z. | 215 |
| Aida, F. | 253 |
| Akhlibininskii, B. V. | B-7 |
| Akhmerov, A. Kh. | 216 |
| Akulov, N. S. | 263 |
| Alabyshev, A. F. | 223 |
| Albersmeyer, W. | 242 |
| Aldoshin, I. | 194 |
| Aldrich, L. D. | 253 |
| Aleksin, V. F. | 261 |
| Alfimov, N. N. | 202 |
| Akhrem, A. A. | 218 |
| Al'tshuler, V. B. | 205 |
| Alexander, G. | 199 |
| Allyanov, V. M. | 258 |
| Andreev, A. F. | 261 |
| Andreev, L. N. | 237 |
| Andreeva, T. S. | 215 |
| Andryasov, A. N. | 203 |
| Angles, R. M. | 256 |
| Anikeev, Ya. F. | 256 |
| Antipin, L. N. | B-7 |
| Aoyagi, S. | 223 |
| Aptek, Yu. E. | 261 |
| Araki, K. | 253 |
| Argudyaeva, N. A. | 213 |
| Arkhangel'skii, V. T. | 235 |
| Arlashchenko, N. I. | 198 |
| Arnautov, A. K. | 214 |
| Aronov, M. P. | 216 |
| Artemov, I. | 244 |
| Artemov, I. S. | 223 |
| Artsimovich, L. A. | 261 |
| Arutyunov, M. G. | B-7 |
| Arutyunyan, S. S. | 238 |
| Asatyani, N. M. | 205 |
| Atakhanov, E. I. | 207 |
| Averbakh, V. S. | 239 |
| Aver'yanova, I. M. | 233 |
| Avetisyan, I. S. | 250 |
| Avrov, V. Ya. | 230 |
| Bacvanski, S. | 195 |
| Baevskii, R. M. | 198 |
| Bagryantaeva, P. P. | 221 |
| Baigalieva, R. B. | 237 |
| Bakuljic, I. | 208 |
| Balandin, A. A. | 220 |
| Balandin, G. A. | 207 |
| Balyasnii, S. S. | 221 |
| Balzer, I. | 194 |
| Barannik, V. P. | 237 |
| Barany, R. | 199 |
| Bardolle, J. | 256 |
| Barer, A. S. | 198 |
| Barzakovskii, V. P. | 223 |
| Bashina, V. M. | 205 |
| Basic, M. | 207 |
| Bass, F. G. | 261 |
| Bass, V. G. | 264 |
| Beck, K. | 224 |
| Behr, T. | 220 |
| Belkin, N. | 268 |
| Belov, V. P. | 205 |
| Belyaev, A. F. | 223 |
| Belyaeva, A. E. | 223 |
| Belyakov, A. A. | 219 |
| Belyakova, L. I. | 205 |
| Benard, J. | 256 |
| Bengus, V. Z. | 264 |
| Ben'kova, N. P. | 235 |
| Berdichevskii, M. N. | 231 |
| Berezin, V. A. | 237 |
| Berezovskaya, N. N. | 199 |
| Bergman, A. G. | 223 |
| Beritic, T. | 216 |
| Bernhard, K. A. | 247 |
| Bielschowsky, A. | 207 |
| Bilibin, A. F. | 208 |
| Bille, H. | 218 |
| Billigman, J. | 250 |
| Billigmann, J. | 258 |
| Biltz, W. | 224 |
| Birman, D. I. | 259 |
| Bjegovic, P. | 216 |
| Blagovolin, N. S. | 231 |
| Blinkov, S. M. | B-7 |
| Blinnikov, A. I. | 230 |
| Bobneva, M. I. | 197 |
| Bock, H. | 248 |
| Bock, J. | 212 |
| Bogdanov, Yu. B. | 231 |
| Bogoslovskii, B. M. | 220 |
| Bogoyavlenskii, V. N. | 244 |
| Boiko, V. | 238 |
| Bokhov, B. B. | 198 |
| Boltyanskii, V. G. | 254 |
| Bondarevskaya, E. A. | 219 |
| Bordier, H. | 199 |
| Borelle, E. | 221 |
| Borisevich, E. S. | 235 |
| Borisov, V. | 268 |
| Borisovich, Yu. F. | 195 |
| Borzyak, P. G. | 263 |
| Bosshard, H. H. | 253 |
| Boucoment, R. | 211 |
| Braack, J. W. G. | 199 |
| Brand, W. | 194 |
| Bronshten, V. A. 22 | 228 |
| Broutelles, R. de | 252 |
| Bruel, A. | 246 |
| Bruevich, N. G. | 244 |
| Brunner, H. | 199 |
| Bucher, H. | 253 |
| Bud'ko, G. D. | 247 |
| Budnikov, P. P. | 249 |
| Bukatin, E. I. | 270 |
| Bukler, V. O. | 239 |
| Bulanzhe, Yu. D. | 227 |
| | 230 |
| | 231 |
| Bundel', A. A. | 202 |
| Bungardt, W. | 259 |
| Burckhardt, D. | 212 |
| Busev, A. I. | 218 |
| Busygin, V. E. | 198 |
| Butsik, M. G. | 214 |
| Buu-Hoi, N. P. | 214 |
| Buyalov, N. I. | 230 |
| Bykov, A. P. | 244 |
| Cachera, R. | 211 |
| Caleta, Z. | 194 |
| Callaham, L. | 218 |
| Capetti, A. | 246 |
| Carow, R. | 200 |
| Carre, P. | 220 |
| Cartashtein, N. G. | 205 |
| Castelli, R. | 224 |
| Cervinka, M. | 256 |
| Chagin, I. M. | 223 |
| Chaikin, A. M. | 224 |
| Chang, Chih-i | 200 |
| Chang, Su. | 218 |
| Ch'ao, Chi-p'ing | 228 |
| Chebotarev, E. E. | 214 |
| Cheishvili, Sh. | 247 |
| Chelnokova, N. A. | 199 |
| Ch'en, Chi-ch'un | 200 |
| Ch'en, Feng-chi | 197 |
| Ch'en, Fu | 238 |
| Chen, Kuo-ta | 230 |
| Chen, Ping-huan | 215 |
| Ch'eng, Chao-hsien | 194 |
| Ch'eng, Kuang-yueh | 261 |
| Chepul'skii, V. G. | 244 |
| Cherdyntsev, V. V. | 225 |
| Chermnykh, G. P. | 235 |
| Chernashkin, V. G. | 239 |
| Chernomordik, G. I. | 247 |
| Chernyak, I. | 208 |
| Chernyakov, I. N. | 209 |
| Chernyavskii, V. S. | 270 |
| Chernysh, V. I. | B-8 |
| Chernyshev, A. | 249 |
| Chetaev, N. G. | 242 |
| Chevassus, F. | 252 |
| Chiang, Cheng-ch'i | 200 |
| Cho, H. | 253 |
| Chou, P'ei-chen | 201 |
| Chuang, Lin-chih | 200 |
| Cizek, I. | 208 |
| Cobic, T. | 195 |
| Colic, D. | 194 |
| Cournot, J. | 223 |
| Crocco, L. | 255 |
| Czaran, L. | 224 |
| Czech, R. | 248 |
| Davydova, S. A. | 214 |
| Decaux, B. | 261 |
| Degenring, F. W. | 208 |
| Dehmelt, K. | 239 |
| Dekaris, M. | 208 |
| Delova, T. B. | 205 |
| Demidov, G. E. | 204 |
| Demin, A. | 196 |
| Demon, L. | 241 |
| Detera, W. | 253 |
| Devoto, G. | 223 |
| Dibizheva, G. V. | 208 |
| Dietrich, I. | 261 |
| Dirksen, B. | 249 |
| Dmokhovskii, V. | 198 |
| Doronin, V. M. | 259 |
| Doucet, Y. | 223 |
| Dovgopol, V. | 246 |
| Drevon, B. | 212 |
| Drozdenko, V. | 268 |
| Drushinin, A. D. | 217 |
| Druzhinina, N. K. | 256 |
| Dubini, M. | 224 |
| Duc, J. A. le | 223 |
| Duchinskaya, V. I. | 222 |
| Duhaut, G. | 241 |
| Dul'man, A. | 268 |
| Dulova, V. | 222 |
| D'yachenko, G. M. | 213 |
| Dzhafarov, G. K. | 214 |
| Dzhakoniya, V. E. | 240 |
| Eckert, B. | 246 |
| Efimov, K. | 246 |
| Efimov, V. E. | 228 |
| Efremov, E. D. | 251 |
| Efremova, S. V. | 231 |
| Egorov, P. I. | 208 |
| Egorychev, N. P. | 214 |
| Eidman, V. Ya. | 262 |
| Eliseev, V. G. | 198 |
| Eliseeva, O. P. | 231 |
| Ellern, S. S. | 231 |
| Elmer, T. H. | 249 |
| Elschnig, A. | 208 |
| Emelyanov, N. A. | 223 |
| Ende, H. vom | 259 |
| Enstedt, L. | 200 |
| Epifanov, G. I. | 250 |
| Epinat'eva, A. M. | 231 |
| Erben, S. | 200 |
| Erdelyi, J. | 220 |
| Erismann, T. | 197 |
| Ermakov, E. I. | 253 |
| Ermakov, L. | 268 |
| Ermolaeva, V. G. | 220 |
| Ertelis, U. | 263 |
| Estrina, A. | 194 |
| Etkin, V. S. | 240 |
| Evteev, S. A. | 230 |
| Ezhevskii, A. | 194 |
| Fain, V. M. | 261 |
| Fal'kovskii, L. A. | 261 |
| Faltys, J. | 253 |
| Fastyuchenko, O. V. | 214 |
| Fedorov, E. K. | 228 |
| Fedorov, V. P. | 244 |
| Fejes, P. | 224 |
| Fel'dman, L. E. | 246 |
| Feltyn', I. | 263 |
| Ferman, A. E. | 231 |
| Fetisov, M. M. | 241 |
| Fick, A. E. | 200 |
| Filipov, S. | 216 |
| Firchuk, R. P. | 212 |
| Fischer, E. O. | 220 |
| Fischer, F. | 220 |
| Fischer, M. H. | 200 |
| Fishzon-Ryas, Yu. I. | 200 |
| Fityalov, S. Ya. | 270 |
| Flury, F. | 212 |
| Fodor, G. | 202 |
| Fokeev, V. M. | 231 |
| Fotiade, B. | 216 |
| Frankovic, A. | 255 |
| Freidel', V. R. | 198 |
| Freidlin, L. Kh. | 220 |
| Freidman, G. I. | 264 |
| Fremd, V. M. | 235 |
| Frese, F. | 246 |
| Fricke, R. | 224 |
| Fridland, V. Ya. | 255 |
| Fridman, G. A. | 220 |
| Fridrikhsberg, D. A. | 227 |
| Fromherz, H. | 218 |
| Fukunaga, K. | 219 |
| Funakubo, E. | 221 |
| Gabry, A. | 261 |
| Gaidei, T. P. | 222 |
| Gaigerov, S. S. | 235 |
| Gainanov, A. G. | 231 |
| Galitskii, V. V. | 240 |
| Gal'kevich, L. | 245 |
| Gambardella, E. | 249 |
| Garopol'skii, V. I. | 257 |
| Gashin, L. I. | 230 |
| Gazizov, Kh. | 268 |
| Geller, B. S. | 204 |
| Gel'man, B. L. | 210 |
| Genes, V. S. | 214 |
| Gerasimov, V. K. | 208 |
| Gerasimyak, V. G. | 215 |
| Gerd, S. V. | 199 |
| Gereb, G. | 197 |
| German, M. A. | 228 |
| Gershenzon, E. M. | 240 |
| Gersht, A. M. | 261 |
| Giandinoto, G. V. | 253 |
| Ginzburg, I. V. | 231 |
| Glebov, V. G. | B-8 |
| Glezer, I. I. | B-7 |
| Globachev, O. I. | 270 |
| Gnuchev, S. M. | 258 |
| Godzhaev, N. M. | 202 |
| Gogodze, V. | 204 |
| Gol'dberg, A. M. | 245 |
| Gol'dberg, E. D. | 214 |
| Goldbreich, Yu. V. | 240 |
| Gol'dfarb, L. | 198 |
| Golikov, A. P. | 208 |
| Golov, G. A. | 198 |
| Goncharov, P. I. | 195 |
| Gorbov, F. D. | 196 |
| | 204 |
| Gordeeva, V. D. | 204 |
| Gorodnitskii, G. V. | 262 |
| Gorokhov, V. A. | 256 |
| Gorshkov, A. | 246 |
| Gorshkov, V. S. | 249 |
| Gotlib, Yu. A. | 202 |
| Gottschalk, F. | 248 |
| Göttsching, L. | 254 |
| Govorovich, E. A. | 213 |
| Grabovetskii, V. | 244 |
| Grant, J. | 197 |
| Greisukh, M. A. | 240 |
| Grib, V. P. | 209 |
| Gribanov, A. | 247 |
| Grigor'ev, P. M. | 195 |
| Grigor'ev, Yu. G. | 198 |
| Grigor'eva, V. S. | 195 |
| Grimm, W. -D. | 231 |
| Grishin, A. | 269 |
| Grishin, N. I. | 228 |
| Groeneveld, A. | 224 |
| Grohn, H. | 253 |
| Grokhovskii, L. P. | 208 |
| Gromova, L. F. | 228 |
| Gromyko, L. G. | 240 |
| Gudzenko, A. I. | 240 |
| Gulida, E. N. | 245 |
| Gumlich, W. | 220 |
| Guniya, S. U. | 229 |
| Gurenko, S. I. | 245 |
| Gusev, R. P. | 250 |
| Guseva, K. A. | 242 |
| Gushchin, V. | 269 |
| Gutenmakher, L. I. | 254 |
| Gutkovskii, V. A. | 248 |
| Guttich, A. | 200 |
| Gzovskii, M. V. | 255 |
| Haag, R. | 212 |
| Hägglund, E. | 253 |
| Hancil, J. | 253 |
| Hanin, M. | 258 |
| Hayamizu, Y. | 263 |
| Hayashi, K. | 253 |
| Heffter, A. | 212 |
| | 213 |
| Hempel, M. | 258 |
| Higuchi, I. | 249 |
| Hintenberger, H. | 263 |
| Hirschberg, R. | 238 |
| Hishiki, Y. | 252 |
| Ho, Ping-sheng | 200 |
| Hoffmann, K. | 255 |
| Hofmann, A. | 259 |
| Hohn, H. | 259 |
| Honrath-Barkhausen, M. | 261 |
| Horstmann, D. | 258 |
| Hou, Yu-ling | 216 |
| Hsi, K'o-fa | 201 |
| Hsia, You-wei | 197 |
| Hsieh, Hsiu-chun | 218 |
| Hsu, Chin-wen | 266 |
| Hu, Chih-te | 218 |
| Hu, Hao-jan | 238 |
| Huang, Chia-szu | 216 |
| Huang, K'ai-yun | 198 |
| Hübner, | 212 |
| | 213 |
| Hummitzsch, W. | 256 |
| Iacovachi, I. | 237 |
| Il'chenko, G. V. | 238 |
| Il'evich, A. I. | 214 |
| Il'nitskii, L. Ya. | 240 |
| Il'yashenko, M. A. | 204 |
| Imai, H. | 226 |
| Imshenetskii, A. A. | 198 |
| Ioganzen, B. G. | 217 |
| Ionin, A. S. | 231 |
| Isagulyants, V. I. | 221 |
| Ispolatov, D. | 204 |
| Ivanov, R. G. | 238 |
| Ivanov, V. N. | 264 |
| Ivanova, T. N. | 250 |
| Iwamura, E. | 256 |
| Izotov, A. A. | 231 |
| Izumnov, A. K. | 208 |
| Janicke, W. | 252 |
| Jayme, G. | 253 |
| Jenckel, L. | 262 |
| Jordan, I. | 256 |
| Jovine, L. | 222 |
| Justin-Besancon, L. | 211 |
| Kachurin, L. G. | 230 |
| Kalachev, P. D. | 240 |
| Kalashnikov, V. P. | 250 |
| Kalinin, S. K. | B-7 |
| Kalinin, Yu. K. | 265 |
| Kallenbach, R. | 259 |
| Kamezaki, T. | 221 |
| Kangro, W. | 224 |
| Kantorovich, L. V. | 254 |
| Kapchenko, L. N. | 232 |
| Kapralova, G. A. | 224 |
| Kapyrin, Yu. V. | 231 |
| Karagodin, V. M. | B-7 |
| Karasik, V. R. | B-7 |
| Karpachev, S. | 224 |
| Karpov, A. | 258 |
| Kartashev, K. B. | 261 |
| Kasabara, M. | 221 |
| Kastroskii, S. A. | 235 |
| Kastyukova, E. P. | 264 |
| Kas'yanenko, A. M. | 208 |
| Katrushenko, R. N. | 209 |

| Author | Page |
|---|---|
| Kavtaradze, N. N. | 263 |
| Kawana, M. | 256 |
| Kazanskii, B. A. | 238 |
| Kazanskii, G. | 240 |
| Kenesarina, N. | 202 |
| Kernc, K. | 207 |
| Kerova, N. I. | 214 |
| Khachatryan, L. | 269 |
| Khalfin, M. Ya. | 237 |
| Khandros, G. M. | 247 |
| Khankina, S. I. | 261 |
| Kharchenko, E. T. | 264 |
| Khasin, G. A. | 258 |
| Khat'yanov, F. I. | 233 |
| Khesin, Ya. E. | 209 |
| Khmyrov, A. | 269 |
| Khodzhishakii, M. I. | 240 |
| Khokhlov, Yu. Ya. | 262 |
| Kholiosh, G. | 260 |
| Khoroshun, D. V. | 265 |
| Khrennikov, K. I. | 238 |
| Khrgyan, A. Kh. | 229 |
| | 235 |
| Khrulev, V. V. | 196 |
| Khvostikov, I. A. | 229 |
| | 235 |
| Kil'chevskii, N. A. | B-8 |
| King, A. | 218 |
| Kirhmajer, V. | 207 |
| Kirmse, W. | 221 |
| Kirnos, D. P. | 235 |
| Kirov, M. | 245 |
| Kiselev, A. E. | 204 |
| Kiseleva, V. M. | 208 |
| Kitaenko, L. G. | B-8 |
| Klassen-Nekiyudova, M. V. | 264 |
| Klebaner, V. | 246 |
| Klebanov, G. | 209 |
| Klein, W. | 220 |
| Klemm, W. | 224 |
| Klimov, K. I. | 251 |
| Klöppel, K. | 255 |
| Klosovskii, B. N. | 200 |
| Klyachkin, L. M. | 209 |
| Klyuev, M. M. | 259 |
| Kobozev, N. I. | 224 |
| Kochmann, M. | 212 |
| Kogan, A. I. | 214 |
| Kogan, E. | 194 |
| Kogan, L. | 245 |
| Koike, K. | 222 |
| Kolesnikov, E. V. | 195 |
| Kolesnikov, Ya. A. | 235 |
| Kolesnikov, Yu. A. | 235 |
| | 236 |
| Kolesov, A. P. | 216 |
| Kolobkov, M. | 238 |
| Kolosov, A. | 258 |
| Kolosov, A. A. | 204 |
| Kol'tsov, N. M. | 248 |
| Komarov, A. G. | 232 |
| Komnik, S. N. | 264 |
| Komoda, K. | 256 |
| Konoshenko, M. F. | 213 |
| Konstantinova, K. V. | 250 |
| Koposov, L. | 249 |
| Korchemkin, F. I. | 253 |
| Korenman, N. M. | 219 |
| Koreshkov, A. A. | 204 |
| Korolev, G. K. | 215 |
| Korshun, M. O. | 219 |
| Korytov, N. V. | 237 |
| Kosanovic, M. | 195 |
| Koschel, H. | 204 |
| Kosheiev, V. V. | 240 |
| Kosov, B. M. | 232 |
| Kostandov, E. A. | 205 |
| Kostygov, N. M. | 212 |
| Kosykh, L. S. | 234 |
| Kotel'nikov, D. D. | 234 |
| Kotlov, F. V. | 233 |
| Kovalenko, E. A. | 209 |
| Kovchik, S. E. | 250 |
| Kovrigina, V. I. | 236 |
| Kozakov, L. A. | 235 |
| Kozic, M. | 216 |
| Kozlov, A. G. | 196 |
| Kozlowski, J. | 266 |
| Krahl, M. | 249 |
| Kraisk, V. | 213 |
| Kranert, K. | 240 |
| Krasil'nikov, L. G. | 200 |
| Kravchenko, Z. L. | 262 |
| Krestinov, G. | 216 |
| Kretovich, V. L. | 202 |
| Krichevskii, S. Z. | 232 |
| Kristan, E. | 232 |
| Kröger, C. | 225 |
| Kroitikov, V. D. | 196 |
| Kroll, W. | 256 |
| Krotkina, N. A. | 209 |
| Kruyt, H. R. | 225 |
| Kruzenshtern, V. M. | 198 |
| Kuck, J. A. | 219 |
| Kudrin, V. S. | 232 |
| Kuklev, V. G. | 258 |
| Kulcar, Z. | 211 |
| Kuleshov, Yu. G. | 240 |
| Kundt, A. | 200 |
| Kuo, K'un-min | 238 |
| Kupershtein, A. P. | 209 |
| Kurakina, L. I. | 195 |
| Kurashov, S. | 209 |
| Kurata, H. | 219 |
| Kuratani, K. | 219 |
| Kurdina, D. S. | 211 |
| Kurihara, Y. | 219 |
| Kurita, T. | 252 |
| Kuroda, T. | 225 |
| Kursanov, D. N. | 251 |
| Kushnerevskii, Yu. V. | 235 |
| Kuznetsov, A. P. | 204 |
| Kuznetsov, M. I. | 199 |
| Kuznetsov, V. R. | 250 |
| Kuznetsova, A. I. | 218 |
| Labinov, S. D. | 255 |
| Laffitte, P. | 234 |
| Lakhuti, D. G. | 270 |
| Lampe, C. | 248 |
| Lange, C. | 201 |
| Langer, M. C. | 212 |
| Lantsberg, L. A. | 209 |
| Lapcheva, V. F. | 228 |
| Lapina, S. A. | 199 |
| Laptev, S. | 238 |
| Lapteva, N. N. | 213 |
| Larikova, G. G. | 219 |
| Lashchenov, V. D. | 232 |
| Latash, Yu. V. | 257 |
| Lavrent'ev, F. F. | 264 |
| Lebedev, E. M. | 234 |
| Lebedev, T. S. | 197 |
| Lebedeva, A. I. | 220 |
| Lecat, M. | 225 |
| Ledanova, S. N. | 215 |
| Lemmerich, J. | 241 |
| Leonov, M. Ya. | 255 |
| Leontovich, M. A. | B-8 |
| Lesnykh, V. I. | 195 |
| Levenko, A. A. | 229 |
| Levenshtein, M. L. | 232 |
| Levin, P. I. | 252 |
| Levitov, N. D. | B-8 |
| Li, P'an-sheng | 238 |
| Li, Shih-wan | 200 |
| Li, Shu-min | 200 |
| Li, Te-ch'uan | 199 |
| Likhonos, A. N. | 209 |
| Likhtenshtein, E. A. | 215 |
| Lin, Shih-ch'ing | 201 |
| Lipkin, S. A. | 270 |
| Litarchek, G. G. | 216 |
| Litwinski, L. | 197 |
| Livchak, T. N. | 239 |
| Lizunov, E. A. | 245 |
| Lobanov, I. | 251 |
| Loewy, A. | 213 |
| Lohamnn, N. | 222 |
| Longiave, C. | 224 |
| Lorenz, B. | 252 |
| Lorenz, R. | 225 |
| Lorica, B. | 94 |
| Lou, Nan-ch'uan | 218 |
| Lunina, E. A. | 211 |
| Luskina, B. M. | 219 |
| Luzhis, A. R. | 209 |
| Lyubimova, T. P. | 240 |
| Lyutsau, V. G. | 264 |
| Ma, T'ai-ho | 195 |
| Magal'nik, G. | 256 |
| Magidson, O. Yu. | 221 |
| Magnitskii, V. A. | 231 |
| Majoros, S. | 263 |
| Makarov, I. V. | 232 |
| Maksimov, V. S. | 255 |
| Maksimovich, B. I. | 257 |
| Malaquin, A. | 232 |
| Malkiman, I. E. | 245 |
| Malkin, B. | 248 |
| Malysheva, M. N. | 211 |
| Mamont, M. S. | 245 |
| Manets, F. I. | 260 |
| Manteifel', B. P. | 217 |
| Mao, Lu-chu | 238 |
| Marinescu, V. | 216 |
| Mark, B. | 208 |
| Markelov, V. A. | 262 |
| Markovich, M. L. | 229 |
| Marshak, A. M. | 213 |
| Marx, H. H. | 213 |
| Masevich, Ts. G. | 209 |
| Mashin, A. | 257 |
| Mashovets, V. P. | 225 |
| Maslov, V. I. | 216 |
| Maslovaric, B. | 195 |
| Mastyukova, Yu. N. | 209 |
| Matevosyan, P. | 258 |
| Matjasic, J. | 217 |
| Matveeva, T. V. | 260 |
| Mavlyutova, M. Z. | 238 |
| Mayer, E. | 202 |
| Mayer, H. | 264 |
| Médard, L. | 221 |
| Medovar, B. I. | 257 |
| | 258 |
| Meier zu Köcker, H. | 225 |
| Meisel, M. N. | 215 |
| Melik-Pashaev, V. S. | 232 |
| Melik-Sarkisyan, S. S. | 202 |
| Meller, J. | 201 |
| Menushenkov, P. P. | 258 |
| Mercier-Parot, L. | 213 |
| Meshcheryakov, Yu. A. | 231 |
| Meshkov, V. | 209 |
| Meshkuotene, E. A. | 252 |
| Messerman, G. T. | 240 |
| Meusel, A. | 220 |
| Meyer, O. | 250 |
| Mikhaikov, M. G. | B-8 |
| Mikhailov, L. G. | B-8 |
| Mikhailova, L. N. | 201 |
| Mikhlin, E. D. | 194 |
| Miki, O. | 219 |
| Mikulicic, V. | 209 |
| Milanovskii, Yu. E. | 217 |
| Milaushkin, P. F. | 233 |
| Milone, M. | 221 |
| Mineeva, I. G. | 233 |
| Mirimova, T. D. | 215 |
| Miropol'skii, Kh. | 248 |
| Misato, T. | 219 |
| Miterev, G. A. | 204 |
| Mitnik, V. B. | 242 |
| Miyabara, K. | 219 |
| Mikhitaryan, A. M. | 255 |
| Mohacek, I. | 210 |
| Möhres | 200 |
| Molchanova, N. S. | 210 |
| Moldenhauer, W. | 219 |
| Montavon, G. | 212 |
| Mordukhai-Boltovskaya, E. D. | 217 |
| Morsching, M. | 253 |
| Mosikhin, E. P. | 251 |
| Moskalenko, M. | 269 |
| Moskovich, V. A. | 270 |
| Mostovova, G. O. | 213 |
| Mosyagina, M. S. | 235 |
| Mottig, H. | 219 |
| Muchnik, V. M. | 229 |
| Müller, E. A. W. | 241 |
| Müller, H. | 258 |
| Murata, H. | 221 |
| Murty, V. L. | 253 |
| Myahkin, E. A. | 250 |
| Nadgornyi, E. M. | 264 |
| Nagai, T. | 221 |
| Nagel, W. A. | 201 |
| Naish, M. N. | 245 |
| Nakai, J. | 233 |
| Nakamura, Y. | 252 |
| Nalbandyan, A. B. | 225 |
| Namba, S. | 252 |
| Napalkov, A. V. | B-8 |
| Nedden, zur | 210, 216 |
| Neiman, N. S. | 241 |
| Nelyapin, N. M. | 211 |
| Neng, S. | 226 |
| Nesterovich, V. P. | 247 |
| Neuhaus, W. | 201 |
| Neustrueva, M. V. | 225 |
| Nevyazhskii, I. | 230 |
| Nguyen Van Thai | 217 |
| Nicolas, P. | 212 |
| Nientker, A. E. | 258 |
| Nikolaeva, M. G. | 214 |
| Noinov, A. S. | 231 |
| Nordman, L. | 254 |
| Nosov, M. V. | 246 |
| Nosov, V. A. | B-8 |
| Novikov, Yu. | 199 |
| Novitskii, P. V. | 241 |
| Novozhilov, N. I. | 229 |
| Nowicki, S. | 217 |
| Obukhov, N. V. | 215 |
| Ocokoljic, S. | 194 |
| Ogawa, K. | 225 |
| Ohyama, Y. | 252 |
| Okamura, S. | 253 |
| Olov, H. | 213 |
| Omel'yanenko, T. | 245 |
| Onyahko, L. V. | 255 |
| Opykhtin, M. A. | 226 |
| Orekhov, P. M. | 270 |
| Orlov, S. M. | 210 |
| Orlov, V. B. | 245 |
| Osipov, L. N. | 210 |
| Osipov, Yu. G. | 230 |
| Osokina, D. N. | 255 |
| Ostroumov, B. A. | 241 |
| Ostrovskaya, N. N. | 210 |
| Ostrovskii, L. A. | 265 |
| Otchenash, E. M. | 245 |
| Ott, E. | 221 |
| Ovander, L. N. | 262 |
| Ovaneaov, G. P. | 233 |
| Ovoshchnikov, M. S. | 214 |
| Palmovic, V. | 210 |
| Pan, A. | 268 |
| Panasyuk, V. V. | 250 |
| Panchenkov, G. M. | 250 |
| Panfilov, V. A. | 246 |
| Pankov, D. V. | 210 |
| Pannetier, G. | 223 |
| Pascalide, G. | 238 |
| Pashinskii, A. Z. | 229 |
| Pasovici, S. | 238 |
| Patrunov, V. G. | B-7 |
| Pauli, H. | 210 |
| Pauthenier, M. | 241 |
| Pech, J. | 219 |
| Peigne, L. | 220 |
| Pelisov, M. G. | 210 |
| Penkov, I. N. | 231 |
| Peric, B. | 200 |
| Perini, M. | 222 |
| Perot, E. | 223 |
| Perov, V. | 237 |
| Persov, G. M. | 217 |
| Petkovsek, V. | 203 |
| Petrescu, P. | 262 |
| Pevzner, B. N. | 236 |
| Pfab, W. | 220 |
| Pichler, H. | 250 |
| Piggot, S. | 254 |
| Pigulevskii, V. V. | 221 |
| Piir, A. | 248 |
| Piletskii, M. | 209 |
| Pinchuk, V. M. | 210 |
| Pinus, N. Z. | 229 |
| Pircher, G. | 241 |
| Pirogov, I. M. | 210 |
| Piskareva, E. V. | 215 |
| Pivanova, P. S. | 215 |
| Plakhtii, A. | 245 |
| Planus, P. | 197 |
| Plate, A. F. | 238 |
| Plavina, I. Z. | 252 |
| Plemyannikov, A. N. | 265 |
| Pleva, M. | 249 |
| Plotnikov, V. A. | 221 |
| Po, Nien | 197 |
| Podlesnaya, A. | 213 |
| Podzerko, V. | 258 |
| Pogodaev, K. N. | 205 |
| Polatukhina, L. G. | 208 |
| Polyakov, V. D. | 225 |
| Polyakova, A. M. | 211 |
| Popilov, L. Ya. | B-8 |
| Popkov, V. L. | 209 |
| Popov, G. | 248 |
| Popov, I. V. | 233 |
| Popov, P. | 254 |
| Popova, L. Ya. | 214 |
| Popova, M. S. | 206 |
| Porfir'ev, V. A. | 196 |
| Portolani, A. | 253 |
| Porubel', L. A. | 209 |
| Posysaeva, L. I. | 258 |
| Pozdnyakov, Yu. F. | 217 |
| Pozezanac, T. | 194 |
| Pozin, M. E. | 225 |
| | 226 |
| Prandtl, L. | 264 |
| Preobrazhenskii, N.A. | 221 |
| Preograzhenskii, V.P. | 236 |
| Prokof'ev, E. V. | 262 |
| Prokof'ev, M. F. | 270 |
| Protasov, V. R. | 217 |
| Protozanov, A. | 269 |
| Pryanishnikova, N. T. | 213 |
| Ptisyn, O. B. | 202 |
| Puchkovskaya, N.A. | B-8 |
| Rabinovich, Yu. I. | 239 |
| Rabionovich, I. Ya. | 247 |
| Raeva, S. N. | 206 |
| Raksha, V. V. | 222 |
| Ramanauskas, A. | 238 |
| Rashba, O. Ya. | 213 |
| Rassokhin, G. I. | 241 |
| Rastaturov, N. S. | 215 |
| Raucourt, A. | 195 |
| Reitsche, W. | 201 |
| Renev, V. K. | 257 |
| Reubi, F. | 210 |
| Revers, W. J. | 197 |
| Revut, I. B. | B-8 |
| Reznichenko, M.S. | 202 |
| Rezyapov, M. | 269 |
| Ri, Sok-hang, | 233 |
| Rodionov, Ya. S. | 265 |
| Roederer, J. G. | 261 |
| Rogovin, D. | 245 |
| Rogovin, Z. A. | 221 |
| Roll, A. | 257 |
| Romanov, S. | 245 |
| Ronco, J. J. | 238 |
| Roomere, P. A. | 209 |
| Rosaokhin, G. I. | 241 |
| Rovinskii, B. M. | 264 |
| Rozanov, D. P. | 259 |
| Rozenberg, I. M. | 236 |
| Rozental', D. L. | 201 |
| Rozhkova, G. I. | 240 |
| Rozhnov, V. | 269 |
| Rozmainskaya, Z. N. | 210 |
| Rubanik, V. P. | 241 |
| | 262 |
| Rudic, M. | 195 |
| Rudnitskii, K. | 196 |
| Rudnitskii, P. | 257 |
| Rudzit, G. P. | 218 |
| Rufanov, I. G. | 213 |
| Rukhadze, A. A. | 262 |
| Rusin, L. Yu. | 224 |
| Rutberg, R. A. | 204 |
| Ruzanov, V. | 245 |
| Ruzhentsev, V. E. | 233 |
| Ryazankin, V. | 254 |
| Rykov, A. V. | 235 |
| | 236 |
| Rymin, V. | 248 |
| Ryss, E. S. | 209 |
| Sabass, U. | 258 |
| Sachs, M. | 201 |
| Saev, S. | 216 |
| Sakai, K. | 226 |
| Sakata, T. | 252 |
| Sano, Shun-ichi | 233 |
| Saraeva, N. T. | 209 |
| Sarbei, O. G. | 263 |
| Saric, S. | 211 |
| Savitskii, I. V. | 215 |
| Sazykin, S. P. | 207 |
| Schardt, R. | 255 |
| Schay, G. | 224 |
| Scheuing, G. | 221 |
| Schimmel, G. | 249 |
| Schmitz, E. | 222 |

| Author | Page |
|---|---|
| Schnabel, R. | 224 |
| Schöllich, K. | 226 |
| Schrag, G. | 257 |
| Schulze, G. | 226 |
| Schuy, K. D. | 263 |
| Schwarz, O. | 201 |
| Schwetge, L. | 236 |
| Sedov, L. | 242 |
| Segal, B. M. | 245 |
| Seidov, A. G. | 234 |
| Seiferth, L. B. | 211 |
| Selenyi, P. | 232 |
| Selifonov, V. | 248 |
| Seliverstova, L. A. | 215 |
| Selyanin, B. P. | 258 |
| Sementsov, V. | 245 |
| Seredina, M. N. | 206 |
| Setlachek, D. | 216 |
| Severilov, V. S. | 245 |
| Shabad, L. M. | 211 |
| Shafit, E. M. | 248 |
| Shagurin, I. I. | 241 |
| Shantarovich, P. S. | 226 |
| | 229 |
| Shchitova, V. M. | 247 |
| Shchukina, M. N. | 220 |
| Shebshaevich, V. S. | 230 |
| Shegal, A. V. | 259 |
| Shekhter, Yu. N. | 250 |
| Shelepenkov, B. | 246 |
| Sheremet'ev, V. A. | 237 |
| Sheshina, G. A. | 215 |
| Shestopalov, V. P. | 265 |
| Shih, Tien-chiu | 261 |
| Shilov, A. E. | 224 |
| Shilov, E. A. | 222 |
| Shkol'nik, V. M. | 259 |
| Shneiderman, M. | 269 |
| Shore, G. V. | 211 |
| Shpak, L. I. | 222 |
| Shpil'man, K. | 234 |
| Shramkov, E. G. | 241 |
| Shtal', V. A. | 235 |
| Shtil'man, E. V. | 254 |
| Shtrum, I. Ya. | 213 |
| Shtutman, F. | 248 |
| Shub, I. | 246 |
| Shufman, L. I. | 259 |
| Shukevich, A. K. | 263 |
| Shul'gin, V. A. | 195 |
| Shul'man, A. | 269 |
| Shul'ts, N. A. | 211 |
| Shushin, V. M. | 241 |
| Sidorov, I. B. | 236 |
| Signeur, A. V. | 219 |
| Simonov, E. V. | 234 |
| Sinani, I. B. | 236 |
| Sindilevich, L. M. | 270 |
| Sinkevich, Z. L. | 206 |
| Sirazutdinov, A. | 238 |
| Sirotinskii, M. N. | 204 |
| Sisakyan, N. M. | 198 |
| Sitdikov, B. S. | 231 |
| Skobel'tsyn, D. V. | B-8 |
| Skrabalo, Z. | 211 |
| Skripov, M. I. | 256 |
| Slonim, A. I. | 236 |
| Smetannikov, P. G. | 206 |
| Smirnov, L. P. | 231 |
| Smirnova, L. A. | 241 |
| Sobolov, N. G. | 211 |
| Soina, N. V. | 241 |
| Sokolov, V. A. | 241 |
| Sokolova, M. N. | 219 |
| Sokolova, N. P. | 263 |
| Solodkov, P. A. | 251 |
| Soloukhin, R. I. | B-8 |
| Solov'ev, V. N. | 236 |
| Solov'ev, Yu. | 242 |
| Sonntag, G. | 234 |
| Sorina, A. M. | 211 |
| Sorokin, Yu. I. | 217 |
| Sorokina, E. I. | 198 |
| Spasskii, V. | 199 |
| Speith, K. G. | 259 |
| Speroni, G. | 222 |
| Spivak, M. Ya. | 213 |
| Stancevic, A. | 196 |
| Standen, A. | 218 |
| Startsev, V. I. | 264 |
| Starykh, I. F. | 208 |
| Staudinger, H. | 222 |
| Steinen, A. von den | 259 |
| Steinhauer, O. | 259 |
| Steinhausen, W. | 201 |
| | 202 |
| Stepanov, A. V. | 264 |
| Stepanov, B. I. | 263 |
| Stepanov, K. N. | 261 |
| | 262 |
| Stepanovich, K. M. | 202 |
| Stoyanov, K. | 216 |
| Strel'chuk, I. V. | 206 |
| Stromberg, A. | 224 |
| Stul'nikov, N. P. | 248 |
| Stumpf, K. -E. | 226 |
| Stupak, L. M. | 257 |
| Sugino, K. | 223 |
| Sulakvelidze, G. K. | 228 |
| Sumarkova, A. A. | 209 |
| Suzo, Z. | 222 |
| Suzuki, R. | 249 |
| Syavtsillo. S. V. | 219 |
| Sysoeva, L. A. | 213 |
| Sytsko, P. A. | 248 |
| Tagaki, Shin-ichiro | 233 |
| Takahashi, Y. | 252 |
| Takei, S. | 222 |
| Takhistov, V. P. | 246 |
| Talanov, V. I. | 240 |
| Talibi, M. A. | 263 |
| Tamoikin, V. V. | 262 |
| T'ang, P'ei-sung | 201 |
| Taran, I. F. | 211 |
| Targanskii, M. | 269 |
| Tatarenko, A. S. | 265 |
| Tav'ev, B. M. | 211 |
| Teodorescu, I. | 260 |
| Terent'ev, A. P. | 219 |
| Termetchikov, M. K. | 236 |
| Tesic, M. | 203 |
| Teslya, A. G. | 234 |
| Tetel'baum, Ya. I. | 242 |
| Teuscher, A. | 210 |
| Thiele, J. | 220 |
| | 222 |
| Thümmler, F. | 260 |
| Tikhomirov, V. P. | 202 |
| Tikidzhiev, R. | 258 |
| Timofeev, M. P. | 229 |
| Ting, Hsi-lin | 266 |
| Tkach, V. K. | 215 |
| Tokmakov, V. A. | 236 |
| Tolkunov, V. P. | 242 |
| Toma, E. | 260 |
| Tomashov, N. D. | 260 |
| Tomchuk, P. M. | 263 |
| Tomic, L. | 196 |
| Topilin, V. V. | 259 |
| Tret'yakov, O. A. | 265 |
| Troitskaya, V. A. | 196 |
| Troshin, A. S. | 201 |
| Trunin, Yu. | 230 |
| Trunova, M. M. | 206 |
| Ts'ai, Ju-wei | 200 |
| Tsaplina, L. A. | 221 |
| Tsaregradskii, V. B. | 263 |
| Tseitina, A. Ya. | 199 |
| Tsfasman, A. Z. | 208 |
| Tsidil'kovskii, I. M. | 264 |
| Tsimmergaki, V. A. | 219 |
| Tsujiuchi, J. | 263 |
| Tuchmann-Duplessis, H. | 213 |
| Tugolukov, V. N. | 211 |
| Turenko, V. I. | 196 |
| Turovskii, Ya. A. | 226 |
| Tyaagaradzhan, R. | 264 |
| Tyukhtin, V. S. | B-8 |
| Uberreiter, K. | 226 |
| Ulicevic, M. | 196 |
| Unichiev, N. D. | 203 |
| Urusovskaya, A. A. | 264 |
| Usanovich, M. | 222 |
| Ushigi, Y. | 249 |
| Usmanova, F. I. | 208 |
| Usyskin, F. | 269 |
| Uvarov, B. S. | 216 |
| Vachugov, G. A. | 258 |
| Vajna, A. | 226 |
| Vanbreuseghem, R. | 214 |
| Varman, T. V. | 245 |
| Varov, A. A. | 234 |
| Vasil'ev, K. | 257 |
| Vasil'ev, V. | 269 |
| Vasil'ev, V. G. | 230 |
| | 234 |
| Vasin, S. I. | 196 |
| Vasyutinskaya, E. M. | 215 |
| Vavilov, V. | 257 |
| Vavilova, M. P. | 204 |
| Vazhnin, S. V. | B-7 |
| Verbitskii, I. L. | 264 |
| Vershilova, P. A. | 211 |
| Veselkov, G. P. | 242 |
| Villaret, M. | 211 |
| Vinograd-Finkel', F. R. | 204 |
| Vinogradov, G. V. | 250 |
| | 251 |
| Vinokurov, L. A. | 267 |
| Vipper, A. B. | 251 |
| Vleduts, G. E. | 270 |
| Vogel, E. | 249 |
| Vogelbach, C. | 221 |
| Vogralik, M. V. | 202 |
| Voinich, L. | 245 |
| Voinovskii, E. V. | 259 |
| Volferz, G. A. | 204 |
| Vol'kenshtein, M. V. | 202 |
| | 226 |
| Volkov, M. | 204 |
| Volkova, G. A. | 199 |
| Volkova, M. A. | 215 |
| Vollerner, N. F. | 242 |
| Volodin, V. M. | 217 |
| Volokhova, N. A. | 198 |
| Voloshinova, E. V. | 254 |
| Volovikova, I. M. | 231 |
| Volynets, L. M. | 229 |
| Vorob'ev, G. G. | 270 |
| Vtyurin, N. | 246 |
| Vucetic, S. | 195 |
| Vujicic, I. | 243 |
| Wagner, K. | 254 |
| Walach, B. | 221 |
| Wallbaum, H. J. | 257 |
| Walz, A. | 255 |
| Wang, Chia-ting | 238 |
| Wang, Chung-nan | 238 |
| Weidenhagen, R. | 222 |
| Weisglass, H. | 211 |
| Wellinger, K. | 259 |
| Willms, W. | 249 |
| Winzer, R. | 225 |
| Witasek, S. | 202 |
| Wittig, G. | 218 |
| Wolf, H. | 267 |
| Wolffberg, | 202 |
| Wolfgang, D. | 253 |
| Wu, Hsueh-chou | 227 |
| Yagi, Y. | 256 |
| Yagovoi, P. N. | 202 |
| Yakovchuk, I. | 237 |
| Yakovlev, N. | 258 |
| Yakovlev, V. P. | 209 |
| Yasuda, T. | 256 |
| Yokoyama, M. | 253 |
| Yoshitake, H. | 214 |
| Yuldasheva, R. | 204 |
| Yulpatov, V. K. | 262 |
| Yushchenko, N. R. | 248 |
| Yushko, S. A. | 234 |
| Yuzhakova, S. P. | 209 |
| Zagarmistr, A. M. | 231 |
| Zagorodnikov, A. A. | 229 |
| Zaiko, N. S. | 199 |
| Zakharova, N. N. | 207 |
| Zakora, L. | 204 |
| Zander, H. v. | 249 |
| Zapivalov, N. | 234 |
| Zdanovskii, A. B. | 218 |
| Zel'dovich, Ya. B. | 227 |
| Zelenin, A. P. | 241 |
| Zelenov, K. K. | 234 |
| Zhadin, V. I. | 199 |
| Zharakii, A. | 269 |
| Zhidko, Yu. M. | 239 |
| Zhigailo, Ya. V. | 222 |
| Zhukov, I. I. | 227 |
| Zhuravlev, S. | 257 |
| Zibrov, V. S. | 229 |
| Zil'berg, I. G. | 221 |
| Zil'bertal', E. A. | 198 |
| Zlatopol'skii, M. Ya. | 246 |
| Zonn, V. | 196 |
| Zonova, E. V. | 217 |
| Zorin, D. I. | 241 |
| Zosimovich, D. P. | 219 |
| Zubov, I. P. | 230 |
| Zykov, I. D. | 234 |

# JOURNAL INDEX


| Journal | Page |
|---|---|
| ABM; Boletim da Associacao Brasileira de Metais, 1950, v. 6, p. 151-178 | 256 |
| Academie des Sciences, Paris. Comptes Rendus (France) | |
| 1926, v. 183, no. 25, p. 1289-1291 | 223 |
| 1927, v. 184, no. 21, p. 1250-1252 | 223 |
| 1936, v. 202, p. 2159-2161 | 220 |
| 1951, v. 232, p. 231-232 | 256 |
| 1953, v. 236, p. 1018-1021 | 223 |
| 1961, v. 253, 4 Dec, p. 2648-2650 | 261 |
| Acta Physica (Hungary) | |
| 1952, v. 2, no. 2, p. 129-139 | 252 |
| Acta Physiologica Scandinavica (Sweden) | |
| 1960, v. 49, no. 2/3, p. 139-147 | 200 |
| Acta Psychologica (Netherlands) | |
| 1950, v. 7, p. 164-189 | 197 |
| 1951, v. 8, p. 129-146 | 197 |
| Actualites Nephrologiques de l'Hopital Necker (France) | |
| 1963, p. 127-141 | 210 |
| Adhäsion (West Germany) | |
| 1961, v. 5, no. 4, p. 169-172 | 249 |
| Aeromagnitnaya S"emka v Geologii, n. p., 1963, p. 1-123 | B-8 |
| Agitator (USSR) | |
| 1963, no. 15, p. 55 | 239 |
| 1963, no. 16, p. 47-49 | 234 |
| Ajia Keizai Jumpo (Japan) | |
| 1963, no. 545, p. 1-8 | 198 |
| 1963, no. 545, p. 8 | 198 |
| Ajia Kenkyu (Japan) | |
| 1963, v. 10, no. 387, p. 6-15 | 197 |
| K. Akademie van Wetenschappen, Amsterdam. Afdeeling Natuurkunde. Proceedings of the Section of Sciences (Netherlands) | |
| 1929, v. 32, no. 7, p. 857-863 | 225 |
| Akademiya Meditsinskikh Nauk SSSR. Vestnik, | |
| 1963, v. 18, no. 10, p. 1-94 | 207 |
| Akademiya Nauk Latviiskoi SSR, Riga. Izvestiya, | |
| 1963, no. 7(192) p. 67-74 | 263 |
| Akademiya Nauk SSSR. Doklady, | |
| 1947, v. 56, no. 5, p. 491-494 | 223 |
| 1949, v. 64, no. 3, p. 357-360 | 223 |
| 1959, v. 128, no. 5, p. 973-976 | 250 |
| 1961, v. 138, no. 3, p. 591-594 | 218 |
| 1962, v. 145, no. 5, p. 1123-1126 | 231 |
| 1962, v. 146, no. 1, p. 82-85 | 250 |
| 1962, v. 146, no. 6, p. 1305-1308 | 261 |
| 1962, v. 147, no. 4, p. 833-834 | 230 |
| 1963, v. 150, no. 6, p. 1281-1284 | 224 |
| 1963, v. 150, no. 6, p. 1366-1369 | 215 |
| 1963, v. 151, no. 6, p. 1295-1298 | 230 |
| Akademiya Nauk SSSR. Institut Biologii Vodokhranilishch. Byulleten', | |
| 1962, no. 12, p. 17-20 | 217 |
| Akademiya Nauk SSSR. Institut Biologii Vodokhranilishch. Trudy, | |
| 1960, v. 3(6) p. 231—237 | 217 |
| Akademiya Nauk SSSR. Institut Fizicheskoi Khimii. Trudy, | |
| 1951, v. 2, no. 1, p. 146-165 | 260 |
| Akademiya Nauk SSSR. Institut Fiziki Zemli. Trudy, | |
| 1963, no. 26(193) p. 3-15 | 235 |
| 1963, no. 26(193) p. 16-24 | 236 |
| 1963, no. 26(193) p. 25-36 | 236 |
| 1963, no. 26(193) p. 37-41 | 235 |
| 1963, no. 26(193) p. 42-51 | 235 |
| 1963, no. 26(193) p. 52-61 | 236 |
| 1963, no. 26(193) p. 62-71 | 235 |
| 1963, no. 26(193) p. 72-77 | 236 |
| 1963, no. 26(193) p. 78-84 | 236 |
| 1963, no. 26(193) p. 85-92 | 236 |
| 1963, no. 26(193) p. 93-97 | 235 |
| 1963, no. 26(193) p. 98-100 | 236 |
| 1963, no. 26(193) p. 101-103 | 236 |
| Akademiya Nauk SSSR. Institut Goryuchikh Iskopaemykh, Trudy, | |
| 1961, v. 12, p. 30-36 | 250 |
| Akademiya Nauk SSSR. Institut Nefti. Trudy, | |
| 1950, v. 1, no. 2, p. 285-294 | 219 |
| Akademiya Nauk SSSR. Institut Okeanologii. Trudy | |
| 1961, v. 49, p. 118-136 | 234 |
| Akademiya Nauk SSSR. Institut Vysshei Nervnoi Deyatel'nosti. Trudy: Seriya Patofiziologicheskaya | |
| 1960, v. 7, p. 5-11 | 205 |
| 1960, v. 7, p. 12-18 | 205 |
| 1960, v. 7, p. 19-28 | 207 |
| 1960, v. 7, p. 29-40 | 206 |
| 1960, v. 7, p. 41-49 | 206 |
| 1960, v. 7, p. 50-67 | 205 |
| 1960, v. 7, p. 68-80 | 205 |
| 1960, v. 7, p. 81-94 | 205 |
| 1960, v. 7, p. 95-106 | 206 |
| 1960, v. 7, p. 107-114 | 206 |
| 1960, v. 7, p. 115-124 | 205 |
| 1960, v. 7, p. 125-132 | 206 |
| 1960, v. 7, p. 133-144 | 206 |
| 1960, v. 7, p. 145-156 | 206 |
| 1960, v. 7, p. 157-167 | 205 |
| 1960, v. 7, p. 168-178 | 205 |
| 1960, v. 7, p. 181-190 | 206 |
| 1960, v. 7, p. 191-199 | 210 |
| 1960, v. 7, p. 200-209 | 206 |
| 1960, v. 7, p. 210-219 | 206 |
| 1960, v. 7, p. 220-231 | 207 |
| 1960, v. 7, p. 232-244 | 205 |
| 1960, v. 7, p. 245-252 | 206 |
| 1960, v. 7, p. 253-263 | 206 |
| 1960, v. 7, p. 264-273 | 205 |
| 1960, v. 7, p. 274-277 | 205 |
| Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya, | |
| 1963, v. 28, no. 5, p. 763-767 | 201 |
| Akademiya Nauk SSSR. Izvestiya. Seriya Fizicheskaya, | |
| 1963, v. 27, no. 1, p. 2-141ff. | C-103 |
| Akademiya Nauk SSSR. Izvestiya. Seriya Geofizicheskaya, | |
| 1963, no. 9, p. 1293-1467 | C-102 |
| Akademiya Nauk SSSR. Laboratoriya Gidrogeologicheskikh Problem. Trudy, | |
| 1961, v. 35 | 233 |
| Akademiya Nauk SSSR. Matematicheskii Institut. Trudy, | |
| 1949, v. 28, p. 104-144 | 254 |
| 1961, v. 60, p. 82-95 | 254 |
| Akademiya Nauk SSSR. Okeanograficheskaya Komissiya, Trudy, | |
| 1961, v. 8, p. 85-97 | 231 |
| Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiyz, | |
| 1940, no. 5, p. 727-738 | 223 |
| 1940, no. 5, p. 825-831 | 223 |
| 1946, no. 4, p. 439-446 | 220 |
| 1952, no. 1, p. 40-43 | 226 |
| Akademiya Nauk SSSR. Paleontologicheskii Institut. Trudy, | |
| 1960, v. 83, p. 64-106 | 233 |
| 1960, v. 83, p. 107-136 | 233 |
| Akademiya Nauk SSSR. Sektor Fiziko-Khimicheskogo Analiza. Izvestiya, | |
| 1940, v. 13, p. 299-320 | 225 |
| Akademiya Nauk SSSR. Sevastopol'skaya Biologicheskaya Stantsiya. Trudy, | |
| 1960, v. 13, p. 269-274 | 216 |
| Akademiya Nauk SSSR. Sibirskoe Otdelenie. Izvestiya, | |
| 1962, no. 4, p. 3-8 | 232 |
| Akademiya Nauk SSSR. Vestnik, | |
| 1963, v. 33, no. 9, p. 23-29 | 198 |
| 1963, v. 33, no. 10, p. 3-8 | 266 |
| 1963, v. 33, no. 10, p. 9-10 | 266 |
| 1963, v. 33, no. 10, p. 80-85 | 234 |
| 1963, v. 33, no. 10, p. 99-100 | 261 |
| 1963, v. 33, no. 10, p. 100-102 | 263 |
| 1963, v. 33, no. 10, p. 109-113 | 194 |
| Akademiya Nauk SSSR. Vestnik, (con.) | |
| 1963, v. 33, no. 10, p. 113-114 | 263 |
| 1963, v. 33, no. 10, p. 114-115 | 246 |
| 1963, v. 33, no. 10, p. 115 | 236 |
| 1963, v. 33, no. 10, p. 120 | 266 |
| 1963, v. 33, no. 10, p. 120-121 | 263 |
| 1963, v. 33, no. 10, p. 121-122 | 266 |
| Akademiya Nauk URSR, Kiev. Institytut Khimii. Zapysky, | |
| 1937, v. 4, no. 3, p. 269-274 | 221 |
| Akademiya Nauk URSR, Kiev. Institytut Mashynoznavstva ta Avtomatyky. Nauchnye Zapiski: Seriya Mashinovedeniya, | |
| 1961, v. 7, Voprosy Mashinovedeniya i Prochnosti v Mashinostroenii, no. 7, p. 16-25 | 235 |
| Akademiya Navuk BSSR, Minsk. Doklady, | |
| 1961, v. 5, no. 12, p. 541-544 | 263 |
| 1963, v. 7, no. 7, p. 453-455 | 263 |
| Albrecht von Graefe's Archiv für Ophthalmologie (Germany) | |
| 1892, v. 38, no. 2, p. 204-220 | 200 |
| 1897, v. 44, p. 1, p. 87-104 | 201 |
| 1939, v. 140, p. 86-115 | 200 |
| Allgemeine Wärmetechnik (West Germany) | |
| 1961, v. 10, no. 11, p. 205-212 | 225 |
| Alluminio (Italy) | |
| 1950, v. 19, p. 541-547 | 226 |
| Angewandte Chemie (West Germany) | |
| 1961, v. 73, no. 1, p. 23-25 | 222 |
| 1961, v. 73, no. 5, p. 161-166 | 221 |
| Annalen der Physik (Germany) | |
| 1863, v. 120, p. 118-158 | 200 |
| Antibiotiki (USSR) | |
| 1963, v. 8, no. 9, p. 832-833 | 213 |
| 1963, v. 8, no. 9, p. 833-835 | 212 |
| 1963, v. 8, no. 9, p. 836-839 | 213 |
| Arbetarskyddet (Sweden) | |
| 1948, no. 1 | 213 |
| Archiv für des Eisenhüttenwesen (Germany) | |
| 1941, v. 14, no. 10, p. 521-526 | 257 |
| Archiv für Ohren-, Nasen- und Kehlkopfheilkunde (Germany) | |
| 1905, v. 65, p. 187-192 | 199 |
| 1932, v. 131/132, p. 134-166 | 201 |
| 1937, v. 143, p. 52-74 | 211 |
| 1939, v. 146, p. 16 | 200 |
| 1939, v. 146, p. 302-333 | 201 |
| Archives de Psychologie (Switzerland) | |
| 1950, v. 33, no. 129, p. 49-70 | 197 |
| Archives des Maladies du Coer et des Vaisseaux (France) | |
| 1934, v. 27, p. 725-741 | 211 |
| Archives d'Opthalmologie (France) | |
| 1930, v. 47, no. 8, p. 560-562 | 199 |
| Arhiv za Poljoprivredne Nauke i Tehniku (Yugoslavia) | |
| 1962, v. 15, no. 49, p. 3-14 | 243 |
| 1962, v. 15, no. 49, p. 15-27 | 195 |
| 1962, v. 15, no. 49, p. 28-38 | 195 |
| 1962, v. 15, no. 49, p. 39-59 | 196 |
| 1962, v. 15, no. 49, p. 60-80 | 194 |
| 1962, v. 15, no. 49, p. 81-95 | 194 |
| 1962, v. 15, no. 49, p. 96-106 | 203 |
| 1962, v. 15, no. 49, p. 107-116 | 196 |
| 1962, v. 15, no. 49, p. 117-124 | 194 |
| 1962, v. 15, no. 49, p. 125-131 | 216 |
| 1962, v. 15, no. 49, p. 132-138 | 196 |
| Arzneimittel-Forschung (West Germany) | |
| 1957, v. 7, p. 663-664 | 213 |
| Atlas Spektral'nykh Linii dlya Difraktsionnogo Spektrografa, Moscow, 1964, 320p. | B-7 |
| Atlas Spektrov Elektronnogo Paramagnitnogo Rezonansa. Vyp. 2: Teoreticheskii Rasschitannye Mnogokomponentnye Spektry, Moscow, 1964, 192p. | B-7 |

| Journal | Page |
|---|---|
| Atlas Spektrov Elektronnogo Paramagnitnogo Rezonansa. Vyp. 3: Teoreticheskii Rasschitannye Assimetrichnye Linii, Moscow, 1964, 192p. | B-7 |
| Avtomaticheskaya Svarka (USSR) 1958, v. 11, no. 1, p. 44-47 | 247 |
| 1963, v. 16, no. 9(126) p. 78-81 | 258 |
| Avtomaticheskoe Regulirovanie i Upravlenie, Moscow, 1962, p. 188-199 | 254 |
| Avtomatika i Telemekhanika (USSR) 1963, v. 24, no. 5, p. 581-713 | C-100 |
| 1963, v. 24, no. 6, p. 717-858 | C-101 |
| Avtomobil'nyi Transport (USSR) 1963, v. 41, no. 7, p. 45-46 | 248 |
| 1963, v. 41, no. 8, p. 38-39 | 248 |
| 1963, v. 41, no. 8, p. 42 | 248 |
| der Bauingenieur (West Germany) 1958, v. 33, no. 9, p. 344-351 | 234 |
| Beton i Zhelezobeton (USSR) 1961, no. 9, p. 414-417 | 239 |
| Biochemical Pharmacology (England) 1962, v. 11, p. 813-822 | 214 |
| Biofizika (USSR) 1963, v. 8, no. 1, p. 3-8 | 202 |
| Biokhimiya (USSR) 1951, v. 16, no. 6, p. 579-583 | 202 |
| 1954, v. 19, no. 2, p. 208-215 | 202 |
| Biokhimiya Plodov i Ovoshchei (USSR) 1959, v. 5, p. 259-276 | 203 |
| Bol'shaya Meditsinskaya Entsiklopediya (USSR) 1962, v. 28, p. 158-160 | 199 |
| 1962, v. 28, p. 256 | 198 |
| 1962, v. 28, p. 256-266 | 198 |
| 1962, v. 28, p. 452-456 | 199 |
| 1963, v. 30, p. 90-91 | 213 |
| 1963, v. 30, p. 938-945 | 209 |
| 1963, v. 30, p. 945-949 | 208 |
| 1963, v. 30, p. 1030-1144 | 209 |
| Botanicheskii Zhurnal (USSR) 1957, v. 42, no. 1, p. 68-72 | 195 |
| 1963, v. 48, no. 5, p. 724-726 | 202 |
| Botyu Kagaku (Japan) 1950, v. 15, p. 201-206 | 221 |
| Brennstoff-Chemie (West Germany) 1935, v. 16, p. 466-469 | 220 |
| 1963, v. 44, no. 4, p. 110-118 | 250 |
| Bumazhnaya Promyshlennost' (USSR) 1962, v. 37, no. 5, p. 14ff | 253 |
| Byulleten' Eksperimental'noi Biologii i Meditsiny (USSR) 1963, v. 56, no. 8, p. 11-13 | 199 |
| 1963, v. 56, no. 8, p. 28-32 | 198 |
| 1963, v. 56, no. 8, p. 33-37 | 198 |
| 1963, v. 56, no. 8, p. 116-120 | 198 |
| Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1963, no. 9, p. 19-21 | 238 |
| 1963, no. 9, p. 24-25 | 238 |
| 1963, no. 9, p. 47-50 | 240 |
| 1963, no. 10, p. 9-13 | 237 |
| 1963, no. 10, p. 13-14 | 237 |
| Centre de Documentation Siderurgique Ciruclaire d'Informations Techniques (France) 1963, v. 20, no. 3, p. 767-777 | 258 |
| Chemicke Listy (Czechoslovakia) 1952, v. 46, p. 382-383 | 219 |
| Chemische Berichte (Germany) 1901, v. 34, p. 68-71 | 220 |
| 1901, v. 34, p. 68-71 | 222 |
| 1929, v. 62, p. 1954-1959 | 219 |
| 1942, v. 75, no. 12, p. 1517-1522 | 221 |
| Chemische Rundschau für Mitteleuropa und Balkan (Hungary) 1929, v. 6, no. 14, p. 83-84 | 220 |
| la Chimica e l'Industria (Italy) 1952, v. 34, p. 4-6 | 222 |
| 1963, v. 45, no. 8, p. 923-926 | 224 |
| 1963, v. 45, no. 8, p. 927-936 | 253 |
| Chimie Analytique (France) 1952, v. 34, p. 189-192 | 221 |
| Ching-chi Yen-chiu (Chinese People's Republic) 1963, no. 12, p. 1-61, 73-78 | B-7 |
| le Chirurgien-Dentiste de France, 1963, v. 23, no. 14 | 212 |
| Chishitsu Chosajo Geppo (Japan) 1960, v. 11, no. 11, p. 1-20; no. 12, p. 26-36 | 230 |
| Chishitsu Chosajo Geppo (Japan) (con.) 1960, v. 11, no. 11, p. 1-20 | 233 |
| 1960, v. 11, no. 12, p. 26-29 | 233 |
| 1960, v. 11, no. 12, p. 30-36 | 233 |
| Chudo Nashego Vremeni, Leningrad, 1963, p. 1-140 | B-7 |
| Chung Kyo Hsin Wen (Chinese People's Republic) 1963, 16 Sep, p. 4-5 | 193 |
| 1963, 19 Sep, p. 11 | 195 |
| 1963, 21 Sep, p. 8 | 230 |
| 1963, 23 Sep, p. 10-11 | 199 |
| 1963, 27 Sep, p. 24-25 | 197 |
| 1963, 2 Oct, p. 8-9 | 194 |
| Colloque sur la Combustion (no. 2) Liege, 5 Dec 55, p. 5-28 | 246 |
| Congres National de l'Aviation Francaise (no. 3) 1-5 Apr 47 | 246 |
| Congresso Nazionale di Chimica Pura ed Applicata (no. 3) 1930. Atti, p. 322-330 | 223 |
| Contributii la Studiul Naturii Controlor Emitatoare du Exoelectronic, n.p., n. d., p. 867-878 | 262 |
| Denki Kagaku (Japan) 1950, v. 18, p. 239-246 | 225 |
| 1951, v. 19, p. 107-110 | 226 |
| Denshi Shashin (Japan) 1961, v. 3, no. 2, p. 16-21 | 252 |
| das Deutsche Gesundheitswesen (East Germany) 1963, v. 18, no. 42, p. 1813-1819 | 204 |
| Deutsche Keramische Gesellschaft. Berichte (West Germany) 1930, v. 11, p. 333-363 | 250 |
| 1963, v. 40, no. 2, p. 159-172 | 260 |
| Deutsche Ophthalmologische Gesellschaft. Bericht (Germany) 1911, no. 37, p. 11-15 | 208 |
| Deutsche Versuchsanstalt für Luftfahrt, e.V. Berichte (West Germany) 1960, no. 136 | 255 |
| DEW Technische Berichte, 1961, v. 1, no. 1, p. 2-5 | 259 |
| Ekonomicheskaya Gazeta (USSR) 1963, no. 32(105) p. 19 | 249 |
| 1963, no. 33(106) insert p. 1-2 | 268 |
| 1963, no. 33(106) insert p. 3-6 | 254 |
| 1963, no. 33(106) insert p. 6-7 | 269 |
| 1963, no. 33(106) insert p. 7-9 | 269 |
| 1963, no. 33(106) insert p. 9-11 | 268 |
| 1963, no. 33(106) insert p. 11-13 | 269 |
| 1963, no. 33(106) insert p. 13 | 269 |
| 1963, no. 33(106) insert p. 13-14 | 254 |
| 1963, no. 33(106) insert p. 14-15 | 254 |
| 1963, no. 33(106) insert p. 15 | 254 |
| 1963, no. 33(106) insert p. 16 | 254 |
| 1963, no. 35(108) p. 3 | 267 |
| 1963, no. 35(108) p. 4 | 267 |
| 1963, no. 35(108) p. 4-5 | 269 |
| 1963, no. 35(108) p. 5 | 267 |
| 1963, no. 36(109) | 243 |
| 1963, no. 36(109) p. 35 | 212 |
| 1963, no. 36(109) p. 35 | 237 |
| 1963, no. 36(109) p. 35 | 243 |
| 1963, no. 37(110) p. 37 | 234 |
| 1963, no. 37(110) p. 37 | 255 |
| 1963, no. 38(111) p. 11-13 | 246 |
| 1963, no. 39(112) p. 5 | 257 |
| 1963, no. 39(112) p. 6 | 258 |
| 1963, no. 39(112) p. 8 | 257 |
| 1963, no. 40(113) p. 4 | 240 |
| 1963, no. 40(113) p. 5 | 260 |
| 1963, no. 40(113) p. 10 | 245 |
| 1963, no. 40(113) p. 11 | 245 |
| 1963, no. 41(114) p. 8-9 | 237 |
| 1963, no. 41(114) p. 38 | 257 |
| 1963, no. 42(115) p. 34 | 267 |
| 1963, no. 42(115) p. 38 | 239 |
| Ekonomika Sel'skogo Khozyaistva (USSR) 1963, v. 34, no. 9, p. 11-19 | 194 |
| 1963, v. 34, no. 9. p. 56-64 | 194 |
| 1963, v. 34, no. 9, p. 65-68 | 194 |
| Elektrichestvo (USSR) 1962, no. 8, p. 20-25 | 241 |
| 1962, no. 8, p. 65-68 | 242 |
| Elektroiskrovaya Obrabotka Materialov, Moscow, 1963, 400p. | B-7 |
| Elektrokhimiya Rasplavlennykh Solei, Moscow, 1963, 320p. | B-7 |
| Elektronische Rundschau (West Germany) 1960, v. 14, no. 4, p. 121-125 | 254 |
| 1960, v. 14, no. 5, p. 181-183 | 240 |
| Elektronnye Informatsionno-Logicheskie Mashiny, Moscow, 1960, 189p. | 254 |
| Elektroshlakovyi Pereplav, Moscow, 1963, 171p. | 257 |
| Englische und Deutsche Chemische Fachausdruecke, 4th ed. rev., n.p., n.d. | 218 |
| Entomologicheskoe Obozrenie (USSR) 1935, v. 25, no. 3/4, p. 206-220 | 217 |
| 1963, v. 42, no. 3, p. 516-519 | 199 |
| Erdöl und Kohle-Erdgas-Petrochemie (West Germany) 1957, v. 10, no. 10, p. 675-677 | 262 |
| 1962, v. 15, no. 11, p. 880-887 | 231 |
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| Farmakologiya i Toksikologiya (USSR) 1963, v. 26, no. 1, p. 28-35 | 212 |
| Faserforschung und Textiltechnik (East Germany) 1962, v. 13, p. 442-449 | 253 |
| Ferrografiya Magnitnaya Skorostnaya Pechat', Moscow, 1964, 160p. | B-7 |
| Fizika i Tekhnika Sil'nykh Magnitnykh Polei, Moscow, 1964, 320p. | B-7 |
| Fizika Poch', Moscow, 1964, 160p. | B-8 |
| Fiziko-Khimicheskie Problemy Formirovaniya Gornykh Porod i Rud (USSR) 1961, v. 1, p. 78-80 | 234 |
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| 1963, 9 Oct, p. 1 | 230 |
| 1963, 14-15 Oct. | 197 |
| 1963, 16 Oct, p. 3 | 266 |
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| 1963, v. 85, no. 1, p. 37-42 | 208 |
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| 1963, v. 85, no. 1, p. 47-62 | 211 |
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| 1963, no. 10, p. 42-43 | 229 |
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| 1963, v. 5, no. 7, p. 28 | 268 |
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| 1963, no. 4, p. 35-36 | 270 |
| 1963, no. 4, p. 42-43 | 270 |
| 1963, no. 8, p. 3-5 | 270 |
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| 537 091 | 267 |
| 563 347 | 220 |
| 603 224 | 266 |
| Patent (France) | |
| 1 322 279 | 252 |
| Patent (Germany) | |
| 307 791 | 251 |
| 339 495 | 252 |
| 351 104 | 253 |
| 375 638 | 252 |
| 536 273 | 219 |
| 735 864 | 249 |
| 864 865 | 221 |
| 896 106 | 253 |
| 1 067 241 | 255 |
| 1 078 488 | 246 |
| 1 098 559 | 241 |
| Patent (Japan) pub. | |
| 25-4373 | 221 |
| 26-294 | 222 |
| 38-7890 | 253 |
| Patent (USSR) | |
| 122 481 | 238 |
| 141 758 | 255 |
| 151 012 | 243 |
| 151 987 | 239 |
| Patent application (Germany) | |
| L 36 026 | 266 |
| R 29 922 | 252 |
| das Papier (West Germany) | |
| 1962, v. 16, no. 9, p. 419-423 | 238 |
| 1962, v. 16, no. 11, p. 664-670 | 253 |
| 1963, v. 17, no. 6, p. 237-246 | 254 |
| Papir a Celulosa (Czechoslovakia) | |
| 1960, v. 15, no. 6, p. 122-125 | 253 |
| Pathologicheskaya Fiziologiya i Eksperimental'naya Terapiya (USSR) | |
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| Plasticheskie Massy (USSR) | |
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| 1939, no. 1, p. 49-58 | 222 |
| 1940, no. 4, p. 54-59 | 223 |
| Polskie Pismo Entomologiczne | |
| 1926, v. 5, no. 1/2, p. 104-108 | 217 |
| Pravda, Leningrad, (USSR) | |
| 1963, 3 Sep, p. 1 | 243 |
| 1963, 6 Sep, p. 2 | 251 |
| 1963, 17 Sep, p. 2 | 245 |
| 1963, 10 Oct, p. 1 | 267 |
| Pravda, Moscow (USSR) | |
| 1962, no. 229, 7 Aug, p. 2 | 242 |
| 1963, 27 Aug | 268 |
| 1963, 27 Aug, p. 2 | 267 |
| 1963, 10 Sep, p. 1 | 243 |
| 1963, 10 Sep, p. 1 | 244 |
| 1963, 17 Sep, p. 2 | 248 |
| 1963, 9 Oct, p. 2 | 238 |
| Pravila Bezopasnosti v Ugolnykh i Slantsevykh Shakhtakh, Moscow | |
| 1958 | 242 |
| la Presse Médicale (France) | |
| 1963, v. 71, 27 Apr. p. 1141 | 213 |
| Priborostroenie (USSR) | |
| 1963, no. 8, p. 3-6 | 244 |
| Pribory i Tekhnika Eksperimenta (USSR) | |
| 1963, v. 8, no. 3, p. 5-208 | C-112 |
| Prikladnaya Geofizika (USSR) | |
| 1958, do. 19, p. 57-108 | 231 |
| Prikladnaya Matematika i Mekhanika (USSR) | |
| 1943, v. 7, p. 81-96 | 242 |
| Priroda (USSR) | |
| 1963, v. 52, no. 9, p. 17-21 | 235 |
| Problemy Gematologii i Perelivaniya Krovi (USSR) | |
| 1963, v. 8, no. 3, p. 20-26 | 211 |
| 1963, v. 8, no. 9, p. 3-12 | 204 |
| 1963, v. 8, no. 9, p. 59-60 | 203 |
| Promyshlennoe Stroitel'stvo (USSR) | |
| 1963, v. 41, no.7, p. 2-3 | 267 |
| 1963, v. 41, no. 9, p. 2-3 | 259 |
| Promyshlennost' Aremenii (USSR) | |
| 1963, v. 6, no. 8, p. 3-5 | 269 |
| 1963, v. 6, no. 8, p. 73-74 | 267 |
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| 1963, p. 1-340 | B-8 |

| Journal | Page |
|---|---|
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| Referativnyi Zhurnal. Otdel'nyi Vypusk 43: Gornoe, Stroitel'noe i Dorozhnoe Mashinostroenie (USSR) 1963, no. 7 | 243 |
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| Rikagaku Kenkyujo Hokoku (Japan) 1963, v. 39, no. 1, p. 27-34 | 252 |
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| Sel'skoe Khozyaistvo Kazakhstana (USSR) 1959, v. 7(?) no. 10, p. 82-85 | 202 |
| Sel'skoe Khozyaistvo Povolzh'ya (USSR) 1958, v. 3, no. 8, p. 64-65 | 195 |
| Silikat Technik (East Germany) 1960, v. 11, no. 2, p. 52-55 | 249 |
| 1963, v. 14, no. 6, p. 163-191 | 218 |
| Silikaty (Czechoslovakia) 1960, v. 4, no. 4, p. 307-319 | 249 |
| Sinteticheskii Kauchuk (USSR) 1933, v. 2, no. 3, p. 13-18 | 238 |
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| 1959, v. 5, p. 141-182 | 217 |
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| Jul 62 | 260 |
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| Sovetskaya Belorussiya (USSR) 1963, 30 Aug, p. 1 | 243 |
| Sovetskaya Estoniya (Estonian SSR) 1963, 3 Oct, p. 2 | 245 |
| Sovetskaya Geologiya (USSR) 1962, v. 5, no. 2, p. 3-16, 61-79, 100-121; no. 3, p. 67-118, 128-135 | 230 |
| 1962, v. 5, no. 2, p. 3-16 | 233 |
| 1962, v. 5, no. 2, p. 61-79 | 232 |
| 1962, v. 5, no. 2, p. 100-121 | 234 |
| 1962, v. 5, no. 3, p. 67-82 | 231 |
| 1962, v. 5, no. 3, p. 83-95 | 233 |
| 1962, v. 5, no. 3, p. 96-107 | 232 |
| 1962, v. 5, no. 3, p. 108-118 | 231 |
| 1962, v. 5, no. 3, p. 128-135 | 234 |
| 1962, v. 5, no. 4, p. 3-14, 40-52, 77-92 | 230 |
| 1962, v. 5, no. 4, p. 3-14 | 232 |
| 1962, v. 5, no. 4, p. 40-52 | 232 |
| 1962, v. 5, no. 4, p. 77-92 | 232 |
| Sovetskaya Kirgiziya (USSR) 1963, 29 Aug | 267 |
| 1963, 29 Aug, p. 3 | 244 |
| 1963, 14 Sep, p. 2 | 243 |
| Sovetskaya Litva (Lithuanian SSR) 1963, 9 Oct, p. 1 | 238 |
| Sovetskaya Meditsina (USSR) 1944, v. 8, no. 12, p. 14-15 | 208 |
| 1963, v. 26, no. 1, p. 79-84 | 210 |
| 1963, v. 26, no. 1, p. 109-111 | 213 |
| Sovetskaya Moldaviya (USSR) 1963, 19 Sep, p. 4 | 251 |
| 1963, 15 Oct, p. 3 | 268 |
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| Sovetskoe Zdravookhranenie (USSR) 1963, v. 22, no. 10, p. 3-8 | 204 |
| 1963, v. 22, no. 10, p. 93-94 | 208 |
| 1963, v. 22, no. 10, p. 94 | 203 |
| 1963, v. 22, no. 10, p. 95-96 | 204 |
| Spravochnik Geofizika, n.p. 1963, v. 3, p. 75-93, 311-329, 345-348, 381-398 | B-7 |
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| Städtehygiene (West Germany) 1959, v. 10, no. 9, p. 178-180 | 242 |
| Stahl undEisen (West Germany) 1951, v. 71, no. 16, p. 826-836 | 258 |
| 1955, v. 75, no. 25, p. 1691-1695 | 250 |
| 1962, v. 82, no. 25, p. 1769-1775 | 258 |
| 1963, v. 83, no. 3, p. 139-144 | 258 |
| 1963, v. 83, no. 16, p. 961-969 | 259 |
| der Stahlbau (West Germany) 1962, v. 31, no. 5, p. 129-136 | |
| Stal' (USSR) 1963, v. 23, no. 9, p. 805-809 | 259 |
| Stroitel' (USSR) 1963, v. 9, no. 9, p. 16-17, 27-31 | 243 |
| Stroitel'nye Materialy (USSR) 1962, v. 8, no. 2, p. 36-39 | 249 |
| Sudostroenie (USSR) 1962, v. 28, no. 9, p. 7-12 | 237 |
| Tekhnika Kino i Televideniya (USSR) 1961, v. 5, no. 5, p. 52-58 | 240 |
| 1963, v. 7, no. 9, inside back cover | 251 |
| Teoreticheskie Osnovy Mekhaniki Tela Peremennogo Sostova (Moscow) 1963, 180p. | B-7 |
| Teoriya Veroyatnostei i Ee Primeneniya (USSR) 1963, v. 8, no. 1 | C-123 |
| Teploenergetika (USSR) 1962, v. 9, no. 8, p. 21-23 | 246 |
| Terapevticheskii Arkhiv (USSR) 1963, v. 35, no. 1, p. 78-83 | 202 |
| 1963, v. 35, no. 8, p. 3-9 | 198 |
| 1963, v. 35, no. 8, p. 56-62 | 200 |
| Termomagnitnye Yavleniya v Poluprovdnikakh, Moscow, 1960, 396p. | 264 |
| Tetsu to Hagane (Japan) 1963, v. 49, no. 3, p. 392-393 | 256 |
| Ti Chiu Wu Li Hsüeh Pao (Chinese People's Republic) 1959, v. 8, no. 1, p. 55-59 | 231 |
| Titan i Ego Splavy (USSR) 1961, v. 5, p. 225-232 | 256 |
| Tokyo Daigaku Kenkyusho Hokoku (Japan) 1950, v. 4, p. 236-239 | 219 |
| Travail et Méthodes (France) 1951, no. 38, Feb, p. 13-16 | 197 |
| Trud, Moscow (USSR) 1963, no. 218, 17 Sep, p. 1 | 258 |
| Trudy Seminara po Metodam Matematicheskogo Modelirovaniya i Teorii Elektricheskikh Tsepei, Kiev, 1963, no. 1, p. 1-247 | B-7 |
| Tsenment (USSR) 1963, v. 29, no. 4, p. 19-20 | 245 |
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| Tsitologiya (USSR) 1963, v. 5, no. 4, p. 365-378 | 201 |
| Udarnye Volnye i Detonatsii v Gaze (Moscow) 1963, 175p. | B-8 |
| Ugol' (USSR) 1963, v. 38, no. 2, p. 45-48 | 242 |
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| Ul'trazvuk v Khimicheskoi Promyshlennosti, Moscow, 1963, 256p. | B-8 |
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| Vestnik Elektropromyshlennosti (USSR) 1960, v. 31, no. 1, p. 33-36 | 240 |
| Vestnik Mashinostroeniya (USSR) 1955, v. 35, no. 7, p. 47-51 | 256 |
| Vestnik Mikrobiologii, Epidemologii i Parasitologii (USSR) 1936, v. 15, p. 334-339 | 204 |
| Vestnik Oftal'mologii (USSR) 1897, v. 14, p. 252-257 | 213 |
| Vestnik Rentgenologii i Radiologii (USSR) 1963, v. 38, no. 4, p. 52-59 | 215 |
| 1963, v. 38, no. 4, p. 59-63 | 214 |
| 1963, v. 38, no. 4, p. 68-69 | 214 |
| Vestnik Svyazi (USSR) 1963, v. 23, no. 12 | B-7 |
| Veterinariya (USSR) 1963, v. 40, no. 2, p. 28-30 | 195 |
| 1963, v. 40, no. 2, p. 73-74 | 195 |
| Voprosy Ekonomiki (USSR) 1963, no. 9, p. 96-102 | 194 |
| Voprosy Ikhtiologii (USSR) 1963, no. 3(28) p. 433-440 | 217 |
| 1963, no. 3(28) p. 490-496 | 217 |
| 1963, no. 3(28) p. 536-555 | 216 |
| 1963, no. 3(28) p. 564-567 | 217 |
| 1963, no. 3(28) p. 573-577 | 217 |
| 1963, no. 3(28) p. 578-579 | 216 |
| 1963, no. 3(28) p. 580-581 | 217 |
| 1963, no. 4(29) p. 585-617, 675-687, 726-737, 757-762 | B-7 |
| Voprosy Onkologii (USSR) 1930, v. 3, no. 1, p. 18-21 | 209 |
| Voprosy Pitaniya (USSR) 1962, v. 21, no. 5, p. 26-31 | 199 |
| Voprosy Psikhiatrii (USSR) 1963, v. 7, no. 2, p. 173-180 | 197 |
| Voprosy Psikhologii (USSR) 1963, v. 9, no. 4, p. 135-142 | 197 |
| 1963, v. 9, no. 4, p. 153-158 | 196 |
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| Page | Journal | Page |
|---|---|---|
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| 256 | Vychislitel'nyi Tsentr, Erevan. Trudy (USSR) 1963, no. 1, p. 7-85 | B-7 |
| 219 | Wen Hui Pao (Chinese People's Republic) 1963, 29 June, p. 1 | 196 |
| 197 | Yakugaku Zasshi (Japan) 1963, v. 83, no. 5, p. 527-531 | 214 |
| 258 | Yang Ch'eng Wan Pao (Chinese People's Republic) 1963, 8 Jul, p. 1 | 239 |
| B-7 | Za Rulem (USSR) 1963, v. 21, no. 4, p. 8-9 | 248 |
| 245 | 1963, v. 21, no. 6, p. 10-11 | 245 |
| 200 | 1963, v. 21, no. 8, p. 8 | 247 |
| 201 | 1963, v. 21, no. 8, p. 8 | 247 |
| | 1963, v. 21, no. 8, p. 8 | 247 |
| B-8 | 1963, v. 21, no. 8, p. 9 | 248 |
| | 1963, v. 21, no. 10, p. 4 | 247 |
| 242 | 1963, v. 21, no. 10, p. 5 | 247 |
| 219 | Zakonomernosti Skoplenii i Migratsi Promyslovykh Ryb v Pribrezhnoi Zone Murmana i Ikh Svyaz's Biologicheskimi, Gidrologicheskimi i Gidrokhimicheskimi Protsessami, Moscow, | |
| B-8 | 1958, p. 150-175 | 217 |
| 250 | Zashchita ot Radioaktivnykh i Otravlyayushchikh Veshchestv, Moscow, | |
| 194 | 1962, 88p | 260 |
| | Zavodskaya Laboratoriya (USSR) | |
| 208 | 1963, v. 29, no. 7, p. 771-896 | C-109 |
| | 1963, v. 29, no. 9, p. 1076-1077 | 257 |
| 240 | 1963, v. 29, no. 10, p. 1191-1193 | 256 |
| 256 | Zdravookhranenie Belorussii (USSR) 1963, v. 9, no. 8, p. 89-91 | 209 |
| | Zeitschrift der Wirtschaftsgruppe Zuckerindustrie (Germany) | |
| 204 | 1947, v. 87, p. 711-715 | 222 |
| 213 | Zeitschrift für Angewandte Mathematik und Mechanik (Germany) 1928, v. 8, Apr, p. 85-91 | 264 |
| 215 | Zeitschrift für Angewandte Physik | |
| 214 | (West Germany) | |
| 214 | 1959, v. 11, no. 10, p. 399-403 | 261 |
| B-7 | Zeitschrift fur Anorganische und Allgemeine Chemie (East Germany) | |
| | 1924, v. 138, p. 285-290 | 225 |
| 195 | 1926, v. 152, p. 225-234 | 224 |
| 195 | 1929, v. 183, p. 127-139 | 225 |
| 194 | 1952, v. 270, p. 114-144 | 226 |
| 217 | | |
| 217 | | |
| 216 | | |
| 217 | | |
| 217 | | |
| 216 | | |
| 217 | | |
| B-7 | | |
| 209 | | |
| 199 | | |
| 197 | | |
| 197 | | |
| 196 | | |
| B-8 | | |

| Journal | Page |
|---|---|
| Zeitschrift für Elektrochemie (Germany) | |
| 1911, v. 17, p. 509-514 | 226 |
| 1925, v. 31, p. 542-545 | 224 |
| 1936, v. 42, no. 12, p. 881-889 | 224 |
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| 1936, v. 28, no. 10, p. 317-319 | 256 |
| 1948, v. 39, no. 8, p. 233-239 | 259 |
| 1950, v. 41, p. 339-343 | 257 |
| 1951, v. 42, p. 197-201 | 257 |
| 1951, v. 42, p. 238-243 | 257 |
| Zeitschrift für Naturforschung (West Germany) | |
| 1951, v. 6b, p. 226 | 218 |
| 1952, v. 7b, p. 377-370 | 220 |
| 1963, v. 18a, no. 1, p. 95-97 | 263 |
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| 1902, v. 27, p. 264-266 | 201 |
| 1903, v. 31, p. 89-109 | 201 |
| 1909, v. 50, p. 209-218 | 202 |
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| 1936, v. 137, p. 87-108 | 201 |
| Zeitschrift für Physikalische Chemie, Frankfurt (West Germany) | |
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| 1962, Neue Folge, v. v. 32, no. 5/6, p. 273-295 | 224 |
| Zement-Kalk-Gips (West Germany) | |
| 1938, v. 11, no. 2, p. 41-45 | 249 |
| 1958, v. 11, no. 2, p. 46-49 | 249 |
| 1958, v. 11, no. 12, p. 550-562 | 248 |
| 1960, v. 13, no. 7, p. 302-310 | 248 |
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| 1932, v. 27, no. 3, p. 97-105 | 207 |
| Zheleznodorozhnyi Transport (USSR) | |
| 1962, v. 44, no. 12, p. 60-62 | 247 |
| 1963, v. 45, no. 1, p. 78-80 | 248 |
| 1963, v. 45, no. 2, p. 44-49 | 247 |
| 1963, v. 45, no. 3, p. 31-33 | 244 |
| 1963, v. 45, no. 4, p. 60-64 | 247 |
| 1963, v. 45, no. 5, p. 78-81 | 248 |
| 1963, v. 45, no. 6, p. 82-85 | 247 |
| 1963, v. 45, no. 7, p. 26-29 | 248 |
| Zhurnal Analiticheskoi Khimii (USSR) | |
| 1952, v. 7, no. 1, p. 52-55 | 219 |
| 1963, v. 18, no. 4, p. 514-519 | 219 |
| 1963, v. 18, p. 639-643 | 219 |
| 1963, v. 18, no. 7, p. 840-850 | 218 |
| Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (USSR) | |
| 1951, v. 21, no. 2, p. 338-340 | 267 |
| 1963, v. 44, no. 6, p. 1753-2228 | C-121 |
| Zhurnal Fizicheskoi Khimii (USSR) | |
| 1935, v. 6, no. 8, p. 1079-1085 | 224 |
| 1938, v. 11, no. 6, p. 852-857 | 224 |
| 1948, v. 22, no. 1, p. 27-48 | 227 |

| Journal | Page |
|---|---|
| Zhurnal Fizicheskoi Khimii (USSR) (con.) | |
| 1948, v. 22, no. 12, p. 1443-1453 | 225 |
| 1961, v. 35, no. 12, p. 2736-2750 | 224 |
| 1962, v. 36, no. 12, p. 2804-2805 | 224 |
| Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) | |
| 1963, no. 3, p. 44-48 | 207 |
| 1963, no. 5, p. 152-153; no. 6, p. 129 | 211 |
| 1963, no. 6, p. 3-8 | 209 |
| 1963, no. 6, p. 128 | 211 |
| 1963, no. 7, p. 120-125 | 208 |
| 1963, no. 7, p 125-131 | 210 |
| 1963, no. 8, p. 34-39 | 211 |
| 1963, no. 8, p. 39-44 | 208 |
| Zhurnal Nauchnoi i Prikladnoi Fotografii i Kinematografii (USSR) | |
| 1962, v. 7, no. 5, p. 380-381 | 252 |
| Zhurnal Nevropatologii i Psikhiatrii (USSR) | |
| 1959, v. 59, no. 2, p. 143-150 | 213 |
| Zhurnal Obshchei Khimii (USSR) | |
| 1938, v. 8, no. 17, p. 1784-1785 | 220 |
| 1947, v. 17, no. 4, p. 669-672 | 222 |
| 1962, v. 62, no. 8, p. 2664-2670 | 220 |
| Zhurnal Prikladnoi Khimii (USSR) | |
| 1943, v. 16, no. 11/12, p. 351-355 | 251 |
| 1947, v. 20, no. 6, p. 523-631 | 226 |
| 1947, v. 20, no. 7, p. 597-604 | 223 |
| 1947, v. 20, no. 7, p. 660-668 | 225 |
| 1947, v. 20, no. 9, p. 883-886 | 221 |
| 1947, v. 20, no. 10, p. 963-975 | 225 |
| 1948, v. 21, no. 3, p. 218-226 | 226 |
| Zhurnal Tekhnicheskoi Fiziki (USSR) | |
| 1938, v. 8, no. 13/14, p. 1229-1234 | 240 |
| 1939, v. 9, p. 537-544 | 250 |
| 1948, v. 18, no. 3, p. 355-376 | 251 |
| Zvezdnaya Astronomiya, Moscow | |
| p959, p. 131-135 | 196 |

# NUMBER INDEX


| Number | Page |
|---|---|
| ACIC TC-631 | 231 |
| ACIC TC-663 | 233 |
| ACIC TC-664 | 233 |
| ACIC TC-665 | 234 |
| ACSI-I-3242 | 202 |
| ACSI-I-3485 | 249 |
| AD-266 655 | 262 |
| AERDL-T-1063 | 262 |
| AERDL-T-1691 | 240 |
| AERDL-T-1879 | 223 |
| AID-P-63-116 | 230 |
| APL/JHU-TG-230-T375 | 263 |
| ATS-00Q73R | 260 |
| ATS-01Q73R | 234 |
| ATS-04P63J | 221 |
| ATS-08Q72G | 252 |
| ATS-12Q72FL | 220 |
| ATS-17Q73R | 231 |
| ATS-23Q72R | 238 |
| ATS-26Q73J | 252 |
| ATS-32Q72J | 214 |
| ATS-34Q73R | 219 |
| ATS-52Q72R | 222 |
| ATS-42Q72R | 218 |
| ATS-50Q73R | 252 |
| ATS-51Q73R | 256 |
| ATS-52P60J | 252 |
| ATS-57Q71F | 263 |
| ATS-59Q72R | 218 |
| ATS-65Q72G | 252 |
| ATS-67Q72J | 252 |
| ATS-68Q72J | 252 |
| ATS-74Q71R | 252 |
| ATS-74Q72R | 251 |
| ATS-84Q73G | 241 |
| ATS-86Q72F | 256 |
| ATS-87Q71G | 250 |
| ATS-89Q72R | 251 |
| ATS-95Q72R | 240 |
| ATS-96Q72G | 255 |
| ATS-1060-GJ | 232 |
| ATS-1064-FJ | 232 |
| ATS-1120-GJ | 234 |
| AWRE Trans-38 | 240 |
| BISI-2693 | 259 |
| BISI-3269 | 239 |
| BISI-3293 | 258 |
| BISI-3413 | 258 |
| CE Trans-2816 | 241 |
| CE Trans-2900 | 246 |
| CLAIRA-T-1 | 249 |
| CLAIRA-T-5 | 249 |
| CLAIRA-T-6 | 249 |
| CLAIRA-T-8 | 248 |
| CLAIRA-T-10 | 249 |
| CLAIRA-T-12 | 248 |
| CLAIRA-T-14 | 249 |
| CLAIRA-T-15 | 248 |
| CLAIRA-T-16 | 246 |
| CLAIRA-T-17 | 194 |
| CTS(Chem)-349 | 224 |
| CTS(Chem)-350 | 253 |
| DIN-106 | 249 |
| DIN-18 550 | 248 |
| DSIR NLL M. 3690 | 217 |
| DSIR NLL M. 10035 | 217 |
| EURAEC-309 | 260 |
| EURAEC-487 | 260 |
| FASEB-S-44-3 | 215 |
| FASEB-S-55-3 | 215 |
| FASEB-S-104-3 | 199 |
| FASEB-S-194-3 | 210 |
| FASEB-S-198-3 | 213 |
| FASEB-S-237-3 | 202 |
| FASEB-S-251-3 | 209 |
| FASEB-S-282-3 | 215 |
| FASEB-S-291-3 | 212 |
| FASEB-S-363-2 | 213 |
| FASEB-S-369-2 | 204 |
| FASEB-S-371-2 | 209 |
| FASEB-S-372-2 | 210 |
| FTD-TT-62-1591 | 198 |
| FTD-TT-63-542 | 196 |
| FTD-TT-63-585 | 260 |
| FTD-TT-63-646 | 255 |
| FTD-TT-63-653 | 250 |
| FTD-TT-63-676 | 242 |
| FTD-TT-63-682 | 246 |
| FTD-TT-63-709 | 229 |
| FTD-TT-63-761 | 197 |
| FTD-TT-63-784 | 214 |
| FTD-TT-63-793 | 196 |
| FTD-TT-63-800 | 232 |
| FTD-TT-63-1013 | 197 |
| FTD-TT-63-1013 (p. 1-5) | 199 |
| FTD-TT-63-1013 (p. 6-12) | 198 |
| FTD-TT-63-1013 (p. 13-19) | 198 |
| FTD-TT-63-1013 (p. 20-28) | 198 |
| GS-Circ-127 | 231 |
| HB-5020 | 258 |
| HB-5160 | 256 |
| HB-5351 | 250 |
| HB-5801 | 258 |
| HB-5815 | 258 |
| HB-5858 | 258 |
| HB-5926 | 256 |
| HB-6031 | 259 |
| HB-6043 | 247 |
| HB-6071 | 256 |
| HB-6086 | 257 |
| HB-6117 | 259 |
| HB-6128 | 256 |
| INSDOC-T-2302 | 222 |
| JPRS-21583 | 255 |
| JPRS-21586 | 204 |
| JPRS-21593 | 227 |
| JPRS-21593 (p. 1-13) | 196 |
| JPRS-21593 (p. 14-15) | 235 |
| JPRS-21593 (p. 16-26) | 229 |
| JPRS-21593 (p. 27-30) | 227 |
| JPRS-21593 (p. 31-43) | 227 |
| JPRS-21593 (p. 44-46) | 235 |
| JPRS-21593 (p. 47-51) | 229 |
| JPRS-21593 (p. 52-60) | 230 |
| JPRS-21593 (p. 61-65) | 235 |
| JPRS-21593 (p. 66-68) | 235 |
| JPRS-21609 | 228 |
| JPRS-21609 (p. 1-3) | 229 |
| JPRS-21609 (p. 4-6) | 234 |
| JPRS-21609 (p. 7-17) | 227 |
| JPRS-21609 (p. 18-24) | 228 |
| JPRS-21619 | 215 |
| JPRS-21661 | 265 |
| JPRS-21661 (p. 1-8) | 266 |
| JPRS-21661 (p. 9-15) | 216 |
| JPRS-21661 (p. 16-20) | 197 |
| JPRS-21661 (p. 21-24) | 193 |
| JPRS-21661 (p. 25-27) | 196 |
| JPRS-21661 (p. 28-29) | 239 |
| JPRS-21711 | 268 |
| JPRS-21711 (p. 1-6) | 234 |
| JPRS-21711 (p. 7-10) | 269 |
| JPRS-21711 (p. 11-12) | 239 |
| JPRS-21711 (p. 13-15) | 267 |
| JPRS-21711 (p. 16-20 | 268 |
| JPRS-21711 (p. 21-22) | 267 |
| JPRS-21711 (p. 23-28) | 267 |
| JPRS-21711 (p. 29-34) | 269 |
| JPRS-21711 (p. 35-40) | 267 |
| JPRS-21711 (p. 41-42) | 267 |
| JPRS-21711 (p. 43-47) | 267 |
| JPRS-21711 (p. 48-52) | 269 |
| JPRS-21711 (p. 53-55) | 267 |
| JPRS-21711 (p. 56-62) | 268 |
| JPRS-21711 (p. 63-67) | 268 |
| JPRS-21711 (p. 70-80) | 268 |
| JPRS-21711 (p. 84-85) | 268 |
| JPRS-21711 (p. 86-89) | 268 |
| JPRS-21711 (p. 90-98) | 269 |
| JPRS-21743 | 243 |
| JPRS-21743 (p. 1-3) | 251 |
| JPRS-21743 (p. 4-5) | 243 |
| JPRS-21743 (p. 6-8) | 244 |
| JPRS-21743 (p. 9-10) | 243 |
| JPRS-21743 (p. 22-23) | 243 |
| JPRS-21743 (p. 26-27) | 236 |
| JPRS-21764 | 270 |
| JPRS-21764 (p. 1-3) | 270 |
| JPRS-21764 (p. 4-9) | 270 |
| JPRS-21764 (p. 10-12) | 270 |
| JPRS-21764 (p. 13-29) | 270 |
| JPRS-21764 (p. 30-39) | 270 |
| JPRS-21764 (p. 40-50) | 270 |
| JPRS-21764 (p. 51-55) | 270 |
| JPRS-21764 (p. 56-58) | 270 |
| JPRS-21768 | 243 |
| JPRS-21768 (p. 1-16) | 246 |
| JPRS-21768 (p. 18) | 243 |
| JPRS-21770 | 254 |
| JPRS-21794 | 243 |
| JPRS-21802 | 212 |
| JPRS-21802 (p. 1-3) | 213 |
| JPRS-21802 (p. 4-5) | 212 |
| JPRS-21802 (p. 6-10) | 213 |
| JPRS-21821 | 244 |
| JPRS-21821 (p. 1-3) | 245 |
| JPRS-21821 (p. 4-6) | 245 |
| JPRS-21821 (p. 7-10) | 246 |
| JPRS-21821 (p. 11-12) | 245 |
| JPRS-21821 (p. 13-15) | 245 |
| JPRS-21821 (p. 16-17) | 244 |
| JPRS-21821 (p. 18-19) | 246 |
| JPRS-21821 (p. 20-21) | 244 |
| JPRS-21821 (p. 22) | 245 |
| JPRS-21834 | 265 |
| JPRS-21834 (p. 1-17) | 198 |
| JPRS-21834 (p. 18) | 198 |
| JPRS-21834 (p. 19-26) | 194 |
| JPRS-21834 (p. 27-34) | 199 |
| JPRS-21834 (p. 35-40) | 197 |
| JPRS-21834 (p. 41-50) | 216 |
| JPRS-21834 (p. 51-53) | 198 |
| JPRS-21834 (p. 54-62) | 228 |
| JPRS-21834 (p. 63-68) | 227 |
| JPRS-21834 (p. 69-71) | 261 |
| JPRS-21839 | 267 |
| JPRS-21839 (p. 3-6) | 268 |
| JPRS-21839 (p. 7-14) | 254 |
| JPRS-21839 (p. 15-16) | 254 |
| JPRS-21839 (p. 17-20) | 269 |
| JPRS-21839 (p. 21-27) | 269 |
| JPRS-21839 (p. 28-33) | 268 |
| JPRS-21839 (p. 34-39) | 269 |
| JPRS-21839 (p. 40-41) | 269 |
| JPRS-21839 (p. 42-44) | 254 |
| JPRS-21839 (p. 45-47) | 254 |
| JPRS-21839 (p. 48-50) | 254 |
| JPRS-21839 (p. 51-52) | 254 |
| JPRS-21840 | 209 |
| JPRS-21843 | 207 |
| JPRS-21864 | 211 |
| JPRS-21869 | 262 |
| JPRS-21869 (p. 1-74) | 261 |
| JPRS-21869 (p. 75-83) | 196 |
| JPRS-21869 (p. 84-107) | 265 |
| JPRS-21869 (p. 108-129) | 262 |
| JPRS-21869 (p. 130-145) | 262 |
| JPRS-21869 (p. 146-174) | 263 |
| JPRS-21869 (p. 175-189) | 264 |
| JPRS-21869 (p. 190-213) | 261 |
| JPRS-21869 (p. 214-239) | 261 |
| JPRS-21869 (p. 240-270) | 264 |
| JPRS-21869 (p. 271-294) | 264 |
| JPRS-21869 (p. 295-304) | 265 |
| JPRS-21869 (p. 305-323) | 265 |
| JPRS-21869 (p. 324-341) | 265 |
| JPRS-21869 (p. 342-357) | 264 |
| JPRS-21869 (p. 358-380) | 262 |
| JPRS-21869 (p. 381-391) | 262 |
| JPRS-21869 (p. 392-394) | 196 |
| JPRS-21869 (p. 395-402) | 240 |
| JPRS-21869 (p. 403-410) | 262 |
| JPRS-21869 (p. 411-415) | 262 |
| JPRS-21869 (p. 416-421) | 262 |
| JPRS-21869 (p. 422-428) | 261 |
| JPRS-21869 (p. 429-436) | 262 |
| JPRS-21869 (p. 437-445) | 265 |
| JPRS-21869 (p. 446-451) | 264 |
| JPRS-21869 (p. 452-458) | 262 |
| JPRS-21869 (p. 459-463) | 261 |
| JPRS-21873 | 257 |
| JPRS-21873 (p. 1-4) | 259 |
| JPRS-21873 (p. 5-9) | 258 |
| JPRS-21873 (p. 10-14) | 259 |
| JPRS-21873 (p. 15-17) | 258 |
| JPRS-21873 (p. 18-20) | 257 |
| JPRS-21873 (p. 31) | 257 |
| JPRS-21875 | 193 |
| JPRS-21879 | 266 |
| JPRS-21894 | 201 |
| JPRS-21912 | 257 |
| JPRS-21912 (p. 1-5) | 258 |
| JPRS-21912 (p. 6-18) | 259 |
| JPRS-21922 | 211 |
| JPRS-21923 | 244 |
| JPRS-21924 | 196 |
| JPRS-21924 (p. 1-4) | 202 |
| JPRS-21924 (p. 5-14) | 197 |
| JPRS-21925 | 200 |
| JPRS-21927 | 256 |
| JPRS-21928 | 266 |
| JPRS-21938 | 193 |
| JPRS-21940 | 194 |
| JPRS-21943 | 218 |
| JPRS-21955 | 265 |
| JPRS-21955 (p. 1-10) | 238 |
| JPRS-21955 (p. 12-16) | 218 |
| JPRS-21955 (p. 21-22) | 218 |
| JPRS-21955 (p. 23-25) | 200 |
| JPRS-21955 (p. 26) | 200 |
| JPRS-21955 (p. 27-30) | 201 |
| JPRS-21955 (p. 31) | 200 |
| JPRS-21955 (p. 32-33) | 238 |
| JPRS-21966 | 198 |
| JPRS-21967 | 230 |
| JPRS-21967 (p. 1-8) | 230 |
| JPRS-21967 (p. 9-14) | 231 |
| JPRS-21967 (p. 15-25) | 232 |
| JPRS-21967 (p. 26-33) | 197 |
| JPRS-21974 | 197 |
| JPRS-21976 | 196 |
| JPRS-21977 | 265 |
| JPRS-21977 (p. 1-3) | 194 |
| JPRS-21977 (p. 4-6) | 230 |
| JPRS-21977 (p. 7-8) | 230 |
| JPRS-21977 (p. 9-12) | 195 |
| JPRS-21977 (p. 13-15) | 193 |
| JPRS-21978 | 235 |
| JPRS-21979 | 263 |
| JPRS-21981 | 244 |
| JPRS-21981 (p. 1-4) | 246 |
| JPRS-21981 (p. 5-7) | 243 |
| JPRS-21981 (p. 8-12) | 245 |
| JPRS-21984 | 209 |
| JPRS-21991 | 203 |
| JPRS-21991 (p. 1-7) | 204 |
| JPRS-21991 (p. 8-10) | 208 |
| JPRS-21991 (p. 11) | 203 |
| JPRS-21991 (p. 12-14) | 204 |
| JPRS-21993 | 234 |
| JPRS-21998 | 204 |
| JPRS-22000 | 214 |
| JPRS-22010 | 216 |
| JPRS-22012 | 216 |
| JPRS-22013 | 216 |
| JPRS-22014 | 216 |
| JPRS-22015 | 198 |
| JPRS-22023 | 244 |
| JPRS-22023 (p. 1-22) | 243 |
| JPRS-22023 (p. 23-24) | 243 |
| JPRS-22023 (p. 25) | 245 |
| JPRS-22023 (p. 26) | 245 |
| JPRS-22032 | 230 |
| JPRS-22034 | 199 |
| JPRS-22038 | 235 |
| JPRS-22038 (p. 1-25) | 235 |
| JPRS-22038 (p. 26-42) | 236 |
| JPRS-22038 (p. 43-69) | 236 |
| JPRS-22038 (p. 70-78) | 235 |
| JPRS-22038 (p. 79-99) | 235 |
| JPRS-22038 (p. 100-123) | 236 |
| JPRS-22038 (p. 124-147) | 235 |
| JPRS-22038 (p. 148-163) | 236 |
| JPRS-22038 (p. 164-178) | 236 |
| JPRS-22038 (p. 179-194) | 236 |
| JPRS-22038 (p. 195-205) | 235 |
| JPRS-22038 (p. 206-211) | 236 |
| JPRS-22038 (p. 212-215) | 236 |
| JPRS-22048 | 228 |
| JPRS-22048 (p. 1-10) | 229 |
| JPRS-22048 (p. 11-17) | 228 |
| JPRS-22048 (p. 18-26) | 229 |
| JPRS-22048 (p. 27-30) | 229 |
| JPRS-22048 (p. 31-40) | 228 |
| JPRS-22048 (p. 41-48) | 229 |
| JPRS-22048 (p. 49-51) | 235 |
| JPRS-22048 (p. 52-54) | 229 |
| JPRS-22048 (p. 55-71) | 227 |
| JPRS-22048 (p. 72-76) | 228 |
| JPRS-22049 | 215 |
| JPRS-22049 (p. 1-16) | 215 |
| JPRS-22059 (p. 17-26) | 214 |
| JPRS-22049 (p. 26-35) | 215 |
| JPRS-22049 (p. 36-48) | 214 |
| JPRS-22049 (p. 49-57) | 214 |
| JPRS-22049 (p. 58-67) | 215 |
| JPRS-22049 (p. 68-76) | 214 |

| Number | Page |
|---|---|
| JPRS-22049 (p. 77-83) | 214 |
| JPRS-22051 | 214 |
| JPRS-22051 (p. 1-12) | 215 |
| JPRS-22051 (p. 13-21) | 214 |
| JPRS-22051 (p. 22-23) | 214 |
| JPRS-22056 | 203 |
| JPRS-22056 (p. 1-3) | 203 |
| JPRS-22056 (p. 4-10) | 203 |
| JPRS-22056 (p. 11-14) | 204 |
| JPRS-22056 (p. 15-19) | 204 |
| JPRS-22057 | 244 |
| JPRS-22057 (p. 1-3) | 245 |
| JPRS-22057 (p. 4-6) | 245 |
| JPRS-22057 (p. 7-11) | 245 |
| JPRS-22057 (p. 12-16) | 245 |
| JPRS-22057 (1. 17-19) | 245 |
| JPRS-22062 | 238 |
| JPRS-22062 (p. 1-2) | 255 |
| JPRS-22062 (p. 4) | 234 |
| JPRS-22062 (p. 5) | 255 |
| JPRS-22062 (p. 6-10) | 257 |
| JPRS-22062 (p. 11-16) | 258 |
| JPRS-22062 (p. 17-23) | 257 |
| JPRS-22062 (p. 24-27) | 258 |
| JPRS-22062 (p. 33-35) | 256 |
| JPRS-22072 | 204 |
| JPRS-22073 | 230 |
| JPRS-22076 | 263 |
| JPRS-22076 (p. 1-6) | 263 |
| JPRS-22076 (p. 7-22) | 263 |
| JPRS-22076 (p. 23-37) | 264 |
| JPRS-22076 (p. 38-59) | 264 |
| JPRS-22076 (p. 60-84) | 264 |
| JPRS-22076 (p. 85-96) | 264 |
| JPRS-22084 | 203 |
| JPRS-22084 (p. 1-25) | 204 |
| JPRS-22084 (p. 26-29) | 203 |
| JPRS-22089 | 230 |
| JPRS-22091 | 236 |
| JPRS-22092 | 254 |
| JPRS-22108 | 201 |
| JPRS-22118 | 268 |
| JPRS-22118 (p. 1-3) | 269 |
| JPRS-22118 (p. 4-8) | 268 |
| JPRS-22118 (p. 9-10) | 267 |
| JPRS-22118 (p. 11-12) | 267 |
| JPRS-22118 (p. 13-17) | 269 |
| JPRS-22118 (p. 18-23) | 268 |
| JPRS-22118 (p. 24-25) | 269 |
| JPRS-22118 (p. 26-27) | 267 |
| JPRS-22118 (p. 28-29) | 268 |
| JPRS-22118 (p. 30-34) | 269 |
| JPRS-22118 (p. 35-39) | 267 |
| JPRS-22118 (p. 40-47) | 269 |
| JPRS-22119 | 215 |
| JPRS-22126 | 247 |
| JPRS-22126 (p. 1-5) | 248 |
| JPRS-22126 (p. 6-7) | 248 |
| JPRS-22126 (p. 8) | 247 |
| JPRS-22126 (p. 9) | 247 |
| JPRS-22126 (p. 11) | 247 |
| JPRS-22126 (p. 13-14) | 248 |
| JPRS-22126 (p. 15-19) | 248 |
| JPRS-22132 | 239 |
| JPRS-22132 (p. 1-27) | 241 |
| JPRS-22132 (p. 28-47) | 265 |
| JPRS-22132 (p. 48-74) | 241 |
| JPRS-22132 (p. 75-97) | 241 |
| JPRS-22132 (p. 98-113) | 239 |
| JPRS-22132 (p. 114-127) | 240 |
| JPRS-22132 (p. 128-143) | 240 |
| JPRS-22132 (p. 144-154) | 241 |
| JPRS-22132 (p. 155-164) | 241 |
| JPRS-22132 (p. 165-176) | 242 |
| JPRS-22132 (p. 177-201) | 242 |
| JPRS-22132 (p. 202-206) | 241 |
| JPRS-22132 (p. 207-211) | 240 |
| JPRS-22132 (p. 212-223) | 240 |
| JPRS-22132 (p. 224-233) | 240 |
| JPRS-22132 (p. 234-240) | 241 |
| JPRS-22132 (p. 241-246) | 240 |
| JPRS-22132 (p. 247-251) | 240 |
| JPRS-22132 (p. 252-259) | 242 |
| JPRS-22132 (p. 260-269) | 241 |
| JPRS-22132 (p. 270-274) | 239 |
| JPRS-22133 | 207 |
| JPRS-22141 | 207 |
| JPRS-22141 (p. 1-11) | 210 |
| JPRS-22141 (p. 12-23) | 209 |
| JPRS-22141 (p. 24-38) | 209 |
| JPRS-22141 (p. 39-47) | 210 |
| JPRS-22141 (p. 48-57) | 210 |
| JPRS-22141 (p. 58-70) | 210 |
| JPRS-22141 (p. 71-80) | 207 |
| JPRS-22141 (p. 81-94) | 209 |
| JPRS-22141 (p. 95-103) | 208 |
| JPRS-22141 (p. 104-110) | 209 |
| JPRS-22141 (p. 111-118) | 208 |
| JPRS-22141 (p. 119-127) | 208 |
| JPRS-22141 (p. 128-135) | 211 |
| JPRS-22141 (p. 136-145) | 205 |
| JPRS-22141 (p. 146-152) | 203 |
| JPRS-22142 | 237 |
| JPRS-22145 | 255 |
| JPRS-22155 | 218 |
| JPRS-22176 | 244 |
| JPRS-22176 (p. 1-4) | 245 |
| JPRS-22176 (p. 5-8) | 237 |
| JPRS-22182 | 207 |
| JPRS-22182 (p. 1-2) | 213 |
| JPRS-22182 (p. 3-10) | 209 |
| JPRS-22182 (p. 11-15) | 208 |
| JPRS-22182 (p. 16-136) | 209 |
| JPRS-22204 | 237 |
| JPRS-22204 (p. 8-12) | 238 |
| JPRS-22204 (p. 13-33) | 237 |
| JPRS-22204 (p. 37-41) | 238 |
| JPRS-22204 (p. 45-49) | 238 |
| JPRS-22204 (p. 62-70) | 237 |
| JPRS-22204 (p. 71-74) | 238 |
| JPRS-22204 (p. 75-76) | 238 |
| JPRS-22206 | 194 |
| JPRS-22206 (p. 1-10) | 194 |
| JPRS-22206 (p. 11-21) | 194 |
| JPRS-22206 (p. 22-25) | 194 |
| JPRS-22210 | 270 |
| JPRS-22210 (p. 1-8) | 270 |
| JPRS-22210 (p. 9-12) | 270 |
| JPRS-22210 (p. 13-15) | 269 |
| JPRS-22210 (p. 17-24) | 270 |
| JPRS-22213 | 198 |
| JPRS-22213 (p. 1-4) | 199 |
| JPRS-22213 (p. 5-6) | 198 |
| JPRS-22213 (p. 7-18) | 198 |
| JPRS-22213 (p. 19-26) | 199 |
| JPRS-22214 | 259 |
| JPRS-22217 | 257 |
| JPRS-22222 | 216 |
| JPRS-22222 (p. 1-11) | 217 |
| JPRS-22222 (p. 12-22/23) | 217 |
| JPRS-22222 (p. 24-52) | 216 |
| JPRS-22222 (p. 53-60) | 217 |
| JPRS-22222 (p. 61-71) | 217 |
| JPRS-22222 (p. 72-76) | 216 |
| JPRS-22222 (p. 77-81) | 217 |
| JPRS-22232 | 207 |
| JPRS-22232 (p. 1-10) | 209 |
| JPRS-22232 (p. 11-12) | 211 |
| JPRS-22232 (p. 13-21) | 208 |
| JPRS-22232 (p. 22-33) | 210 |
| JPRS-22232 (p. 34-43) | 211 |
| JPRS-22232 (p. 44-52) | 208 |
| JPRS-22232 (p. 53-61) | 207 |
| JPRS-22233 | 247 |
| JPRS-22233 (p. 1-5) | 248 |
| JPRS-22233 (p. 11-12) | 247 |
| JPRS-22233 (p. 13-15) | 247 |
| JPRS-22233 (p. 20-21) | 248 |
| JPRS-22237 | 266 |
| JPRS-22237 (p. 1-11) | 197 |
| JPRS-22237 (p. 12-20) | 197 |
| JPRS-22237 (p. 21-26) | 266 |
| JPRS-22237 (p. 27-28) | 266 |
| JPRS-22237 (p. 29-40) | 195 |
| JPRS-22237 (p. 41-43) | 215 |
| JPRS-22237 (p. 44-47) | 266 |
| JPRS-22263 | 260 |
| JPRS-22288 | 259 |
| JPRS-22299 | 237 |
| JPRS-22299 (p. 1-2) | 251 |
| JPRS-22299 (p. 6) | 193 |
| JPRS-22322 | 260 |
| JPRS-22326 | 244 |
| JPRS-22326 (p. 1-2) | 243 |
| JPRS-22326 (p. 3-4) | 237 |
| JPRS-22326 (p. 14) | 203 |
| JPRS-22326 (p. 24) | 212 |
| JPRS-22326 (p. 32-33) | 239 |
| JPRS-22326 (p. 42-44) | 239 |
| JPRS-22326 (p. 72-75) | 242 |
| JPRS-22329 | 218 |
| JPRS-22338 | 247 |
| JPRS-22339 | 266 |
| JPRS-22339 (p. 1-8) | 266 |
| JPRS-22339 (p. 9-12) | 266 |
| JPRS-22339 (p. 13-19) | 234 |
| JPRS-22339 (p. 20-22) | 261 |
| JPRS-22339 (p. 23-25) | 263 |
| JPRS-22339 (p. 26-32) | 194 |
| JPRS-22339 (p. 33-34) | 263 |
| JPRS-22339 (p. 35-36) | 248 |
| JPRS-22339 (p. 37-38) | 236 |
| JPRS-22339 (p. 39-40) | 266 |
| JPRS-22339 (p. 41-42) | 265 |
| JPRS-22339 (p. 43-44) | 266 |
| JPRS-22370 | 237 |
| JPRS-22370 (p. 1-8) | 237 |
| JPRS-22370 (p. 9-10) | 237 |
| JPRS-22372 | 244 |
| JPRS-22372 (p. 4-7) | 251 |
| JPRS-22372 (p. 8-11) | 260 |
| JPRS-22372 (p. 12) | 251 |
| JPRS-22372 (p. 25-33) | 240 |
| JPRS-22373 | 261 |
| JPRS-22378 | 227 |
| JPRS-22378 (p. 1-2) | 227 |
| JPRS-22378 (p. 3-5) | 227 |
| JPRS-22378 (p. 6-9) | 227 |
| JPRS-22378 (p. 10-11) | 227 |
| JPRS-22392 | 239 |
| JPRS-22392 (p. 35-36) | 239 |
| JPRS-22392 (p. 56-58) | 239 |
| JPRS-22392 (p. 84-91) | 240 |
| JPRS-22392 (p. 112-113) | 256 |
| JPRS-22392 (p. 114-115) | 256 |
| JPRS-22392 (p. 116-117) | 255 |
| JPRS-22392 (p. 118-119) | 256 |
| K-H-3485-b | 219 |
| LC-11126 | 249 |
| MATT Trans-2 | 261 |
| N64-10118 | 215 |
| N64-10199 | 227 |
| N64-10353 | 244 |
| N64-10354 | 256 |
| N64-10384 | 230 |
| N64-10385 | 197 |
| N64-10388 | 209 |
| N64-10390 | 204 |
| N64-10392 | 214 |
| N64-10598 | 263 |
| N64-10599 | 198 |
| N64-10600 | 216 |
| N64-10845 | 267 |
| N64-10850 | 200 |
| N64-10852 | 196 |
| N64-11265 | 270 |
| N64-11266 | 230 |
| N64-11272 | 201 |
| N64-12007 | 227 |
| NASA-TT-F-84 | 228 |
| NASA-TT-F-84 (p. 1-6) | 228 |
| NASA-TT-F-84 (p. 7-13) | 228 |
| NASA-TT-F-84 (p. 14-17) | 229 |
| NASA-TT-F-84 (p. 18-34) | 229 |
| NASA-TT-F-84 (p. 35-42) | 228 |
| NASA-TT-F-84 (p. 43-60) | 229 |
| NCB-A-2038/SEH | 250 |
| NOO Trans-176 | 234 |
| NRCC-C-4479 | 263 |
| NRCC-C-4483 | 241 |
| NRCC-C-4555 | 242 |
| NRCC-TT-114 | 225 |
| NRCC-TT-1084 | 241 |
| NRCC-TT-1086 | 263 |
| NRCC-TT-1091 | 242 |
| PB-70428 | 220 |
| PB-87459 superseded | 241 |
| PB-90807 | 249 |
| PB-97158 | 249 |
| PB-114 341 superseded | 255 |
| PL-480 Agr (TT-61-31261) | 217 |
| PL-480 Agr (TT-62-11755/3) | 193 |
| PL-480 Agr (TT-62-11755/3) p. 5-15 | 243 |
| PL-480 Agr (TT-62-11755/3) p. 17-28 | 195 |
| PL-480 Agr (TT-62-11755/3) p. 29-40 | 195 |
| PL-480 Agr (TT-62-11755/3) p. 41-60 | 196 |
| PL-480 Agr (TT-62-11755/3) p. 61-80 | 194 |
| PL-480 Agr (TT-62-11755/3) p. 81-94 | 194 |
| PL-480 Agr (TT-62-11755/3) p. 95-104 | 203 |
| PL-480 Agr (TT-62-11755/3) p. 105-114 | 196 |
| PL-480 Agr (TT-62-11755/3) p. 115-122 | 194 |
| PL-480 Agr (TT-62-11755/3) p. 123-130 | 216 |
| PL-480 Agr (TT-62-11755/3) p. 131-135 | 196 |
| PL-480 Agr (TT-63-11017) | 195 |
| PL-480 Agr (TT-63-11023) | 202 |
| PL-480 Agr (TT-63-11025) | 203 |
| PL-480 Agr (TT-63-11030) | 196 |
| PL-480 Agr (TT-63-11031) | 195 |
| PL-480 Agr (TT-63-11032) | 217 |
| PL-480 Agr (TT-63-11043) | 202 |
| PL-480 Agr (TT-63-11044) | 202 |
| PL-480 Agr (TT-63-11047) | 195 |
| PL-480 Agr (TT-63-11188) | 195 |
| PL-480 Comm (TT-61-31204) | 239 |
| PL-480 Comm (TT-63-11072) | 236 |
| PL-480 HEW (TT-63-11168) | 204 |
| PL-480 HEW (TT-63-11168) p. 1-6 | 205 |
| PL-480 HEW (TT-63-11168) p. 7-14 | 205 |
| PL-480 HEW (TT-63-11168) p. 15-23 | 207 |
| PL-480 HEW (TT-63-11168) p. 24-34 | 206 |
| PL-480 HEW (TT-63-11168) p. 35-43 | 206 |
| PL-480 HEW (TT-63-11168) p. 44-62 | 205 |
| PL-480 HEW (TT-63-11168) p. 63-74 | 205 |
| PL-480 HEW (TT-63-11168) p. 75-88 | 205 |
| PL-480 HEW (TT-63-11168) p. 89-100 | 206 |
| PL-480 HEW (TT-63-11168) p. 101-108 | 206 |
| PL-480 HEW (TT-63-11168) p. 109-117 | 205 |
| PL-480 HEW (TT-63-11168) p. 118-125 | 206 |
| PL-480 HEW (TT-63-11168) p. 126-137 | 206 |
| PL-480 HEW (TT-63-11168) p. 138-148 | 206 |
| PL-480 HEW (TT-63-11168) p. 149-159 | 205 |
| PL-480 HEW (TT-63-11168) p. 160-169 | 205 |
| PL-480 HEW (TT-63-11168) p. 170-179 | 206 |
| PL-480 HEW (TT-63-11168) p. 180-188 | 210 |
| PL-480 HEW (TT-63-11168) p. 189-198 | 206 |
| PL-480 HEW (TT-63-11168) p. 199-209 | 206 |
| PL-480 HEW (TT-63-11168) p. 210-222 | 207 |
| PL-480 HEW (TT-63-11168) p. 223-235 | 205 |
| PL-480 HEW (TT-63-11168) p. 236-243 | 206 |
| PL-480 HEW (TT-63-11168) p. 244-252 | 206 |
| PL-480 HEW (TT-63-11168) p. 253-262 | 205 |
| PL-480 HEW (TT-63-11168) p. 263-266 | 205 |
| PL-480 HEW (TT-63-11171) | 200 |
| PL-480 HEW (TT-63-11458/1) | 207 |
| PL-480 HEW (TT-63-11458/1) p. 1-9 | 211 |
| PL-480 HEW (TT-63-11458/1 p. 10-16 | 207 |
| PL-480 HEW (TT-63-11458/1) p. 17-20 | 211 |
| PL-480 HEW (TT-63-11458/1) p. 21-33 | 208 |
| PL-480 HEW (TT-63-11458/1) p. 34-39 | 208 |
| PL-480 HEW (TT-63-11458/1) p. 40-43 | 210 |

| Number | Page |
|---|---|
| PL-480 HEW (TT-63-11458/1) p. 44-59 | 211 |
| PL-480 HEW (TT-63-11458/1 p. 60-66 | 210 |
| PL-480 HEW (TT-63-11458/1 p. 67-71 | 209 |
| PL-480 HEW (TT-63-11458/1) p. 72-75 | 216 |
| PL-480 Int (TT-63-11109) | 216 |
| PL-480 Int (TT-63-11125) | 217 |
| PL-480 Int (TT-63-11149) | 229 |
| PL-480 NSF (TT-62-11062) | 266 |
| PL-480 Smi (TT-61-11241) | 202 |
| PL-480 Smi (TT-61-11244) | 217 |
| PL-480 Smi (TT-61-11282) | 203 |
| PL-480 Smi (TT-63-11166) | 199 |
| PSC-59-520 | 213 |
| RAE Trans-906 | 250 |
| RIS-E-821 | 262 |
| RIS-R-694 | 223 |
| RT-435 | 222 |
| RT-795 | 208 |
| RT-833 | 222 |
| RT-955 | 225 |
| RT-957 | 223 |
| RT-958 | 223 |
| RT-1133 | 223 |
| RT-1508 | 220 |
| RT-1798 | 224 |
| RT-1801 | 225 |
| RT-1811 | 224 |
| RT-2835 | 221 |
| RTS-2257 | 237 |
| RTS-2343 | 251 |
| RTS-2344 | 242 |
| SLA-AL-194 | 223 |
| SLA-AL-243 | 220 |
| SLA-AL-340 | 224 |
| SLA-AL-379 | 224 |
| SLA-AL-423 | 225 |
| SLA-AL-424 | 225 |
| SLA-AL-451 | 225 |
| SLA-AL-632 | 226 |
| SLA-AL-657 | 221 |
| SLA-AL-855 | 220 |
| SLA-R-02190 | 225 |
| SMRE Trans-4785 | 255 |
| SMRE Trans-4807 | 242 |
| TT-60-19512 | 220 |
| TT-60-19546 | 208 |
| TT-60-19600 | 209 |
| TT-60-19635 | 213 |
| TT-60-19707 | 204 |
| TT-60-19747 | 211 |
| TT-61-11241 | 202 |
| TT-61-11244 | 217 |
| TT-61-11282 | 203 |
| TT-61-14119 | 207 |
| TT-61-14160 | 208 |
| TT-61-14172 | 200 |
| TT-61-14179 | 200 |
| TT-61-14276 | 200 |
| TT-61-14302 | 199 |
| TT-61-14308 | 200 |
| TT-61-14315 | 200 |
| TT-61-14316 | 201 |
| TT-61-14328 | 211 |
| TT-61-14329 | 199 |
| TT-61-14347 | 201 |
| TT-61-14349 | 201 |
| TT-61-14350 | 201 |
| TT-61-14375 | 201 |
| TT-61-14447 | 202 |
| TT-61-14451 | 202 |
| TT-61-14459 | 216 |
| TT-61-14462 | 210 |
| TT-61-14490 | 211 |
| TT-61-14649 | 202 |
| TT-61-14650 | 201 |
| TT-61-14653 | 201 |
| TT-61-14654 | 200 |
| TT-61-14856 | 201 |
| TT-61-14860 | 201 |
| TT-61-14865 | 199 |
| TT-61-16036 | 199 |
| TT-61-16515 | 221 |
| TT-61-16746 | 252 |
| TT-61-16747 | 253 |
| TT-61-16750 | 252 |
| TT-61-16808 | 238 |
| TT-61-16810 | 250 |
| TT-61-28095 | 222 |
| TT-61-28111 | 221 |
| TT-61-31204 | 239 |
| TT-61-31261 | 217 |
| TT-61-11062 | 266 |
| TT-62-11755/3 | 193 |
| TT-62-11755/3 (p. 5-15) | 243 |
| TT-62-11755/3 (p. 17-28) | 195 |
| TT-62-11755/3 (p. 29-40) | 195 |
| TT-62-11755/3 (p. 41-60) | 196 |
| TT-62-11755/3 (p. 61-80) | 194 |
| TT-62-11755/3 (p. 81-94) | 194 |
| TT-62-11755/3 (p. 95-104) | 203 |
| TT-62-11755/3 (p. 105-114) | 196 |
| TT-62-11755/3 (p. 115-122) | 194 |
| TT-62-11755/3 (p. 123-130) | 216 |
| TT-62-11755/3 (p. 131-135) | 196 |
| TT-62-12431 | 262 |
| TT-62-16339 | 267 |
| TT-62-16362 | 266 |
| TT-62-18390 | 267 |
| TT-62-24774 | 261 |
| TT-62-32178 | 223 |
| TT-63-10206 (MAKING) | 219 |
| TT-63-11017 | 195 |
| TT-63-11023 | 202 |
| TT-63-11025 | 203 |
| TT-63-11030 | 196 |
| TT-63-11031 | 195 |
| TT-63-11032 | 217 |
| TT-63-11043 | 202 |
| TT-63-11044 | 202 |
| TT-63-11047 | 195 |
| TT-63-11072 | 236 |
| TT-63-11109 | 216 |
| TT-63-11125 | 217 |
| TT-63-11149 | 229 |
| TT-63-11166 | 199 |
| TT-63-11168 | 204 |
| TT-63-11168 (p. 1-6) | 205 |
| TT-63-11168 (p. 7-14) | 205 |
| TT-63-11168 (p. 15-23) | 207 |
| TT-63-11168 (p. 24-34) | 206 |
| TT-63-11168 (p. 35-43) | 206 |
| TT-63-11168 (p. 44-62) | 205 |
| TT-63-11168 (p. 63-74) | 205 |
| TT-63-11168 (p. 75-88) | 205 |
| TT-63-11168 (p. 89-100) | 206 |
| TT-63-11168 (p. 101-108) | 206 |
| TT-63-11168 (p. 109-117) | 205 |
| TT-63-11168 (p. 118-125) | 206 |
| TT-63-11168 (p. 126-137) | 206 |
| TT-63-11168 (p. 138-148) | 206 |
| TT-63-11168 (p. 149-159) | 205 |
| TT-63-11168 (p. 160-169) | 205 |
| TT-63-11168 (p. 170-179) | 206 |
| TT-63-11168 (p. 180-188) | 210 |
| TT-63-11168 (p. 189-198) | 206 |
| TT-63-11168 (p. 199-209) | 206 |
| TT-63-11168 (p. 210-222) | 207 |
| TT-63-11168 (p. 223-235) | 205 |
| TT-63-11168 (p. 236-243) | 206 |
| TT-63-11168 (p. 244-252) | 206 |
| TT-63-11168 (p. 253-262) | 205 |
| TT-63-11168 (p. 263-266) | 205 |
| TT-63-11171 | 200 |
| TT-63-11188 | 195 |
| TT-63-11458/1 | 207 |
| TT-63-11458/1 (p. 1-9) | 211 |
| TT-63-11458/1 (p. 10-16) | 207 |
| TT-63-11458/1 (p. 17-20) | 211 |
| TT-63-11458/1 (p. 21-33) | 208 |
| TT-63-11458/1 (p. 34-39) | 208 |
| TT-63-11458/1 (p. 40-43) | 210 |
| TT-63-11458/1 (p. 44-59) | 211 |
| TT-63-11458/1 (p. 60-66) | 210 |
| TT-63-11458/1 (p. 67-71) | 209 |
| TT-63-11458/1 (p. 72-75) | 216 |
| TT-63-11735 | 249 |
| TT-63-11749 | 228 |
| TT-63-11749 (p. 1-6) | 228 |
| TT-63-11749 (p. 7-13) | 228 |
| TT-63-11749 (p. 14-17) | 229 |
| TT-63-11749 (p. 18-34) | 229 |
| TT-63-11749 (p. 35-42) | 228 |
| TT-63-11749 (p. 43-60) | 229 |
| TT-63-11753 | 228 |
| TT-63-11762 | 202 |
| TT-63-11764 | 263 |
| TT-63-12022(BISI-3293) | 258 |
| TT-63-12457(ATS-04P63J) | 221 |
| TT-63-14733 | 254 |
| TT-63-15855(EURAEC-487) | 260 |
| TT-63-16160 | 238 |
| TT-63-16399 | 262 |
| TT-63-16591 | 213 |
| TT-63-16610 | 222 |
| TT-63-16629 | 248 |
| TT-63-16672 | 241 |
| TT-63-16782 | 253 |
| TT-63-16785 | 249 |
| TT-63-17713-9 (INTERNATIONAL) | 230 |
| TT-63-17713-9(p.1077-1086) (Ovanesov) | 233 |
| TT-63-17713-9(p.1087-1098) (Levenshtein) | 232 |
| TT-63-17713-9(p.1099-1113) (Yushko) | 234 |
| TT-63-17713-9(p.1114-1122) (Mineeva) | 233 |
| TT-63-17713-9(p.1123-1136) (Ginzburg) | 231 |
| TT-63-17713-9(p.1137-1146) (Kapchenko) | 232 |
| TT-63-17713-9(p.1147-1155) (Gainanov) | 231 |
| TT-63-17713-9(p.1156-1163) (Seidov) | 234 |
| TT-63-17713-9(p.1164-1192) (Ruzhentsev) | 233 |
| TT-63-17713-10 (INTERNATIONAL) | 230 |
| TT-63-17713-10(p.1243-1263) (Sano) | 233 |
| TT-63-17713-10(p.1264-1267) (Sano) | 233 |
| TT-63-17713-10(p.1268-1275) (Sano) | 233 |
| TT-63-17713-10(p.1280-1289) (Kudrin) | 232 |
| TT-63-17713-10(p.1290-1296) (Kosov) | 232 |
| TT-63-17713-10(p.1297-1307) (Komarov) | 232 |
| TT-63-17713-10(p.1308-1336) (Ruzhentsev) | 233 |
| TT-63-17713-10(p.1337-1346) (Ionin) | 231 |
| TT-63-18000 | 239 |
| TT-63-18003 | 253 |
| TT-63-18101 | 221 |
| TT-63-18237 | 219 |
| TT-63-18312 | 225 |
| TT-63-18477 | 213 |
| TT-63-18525 | 253 |
| TT-63-18566 | 225 |
| TT-63-18800 | 214 |
| TT-63-18850 | 255 |
| TT-63-18862 | 241 |
| TT-63-18916 | 263 |
| TT-63-18951 | 221 |
| TT-63-18955 | 222 |
| TT-63-18969 | 221 |
| TT-63-18974 | 222 |
| TT-63-18975 | 221 |
| TT-63-20162 | 226 |
| TT-63-20164 | 226 |
| TT-63-20178 | 195 |
| TT-63-20197 | 212 |
| TT-63-20257 | 250 |
| TT-63-20284 | 200 |
| TT-63-20298 | 220 |
| TT-63-20340 | 252 |
| TT-63-20380 | 244 |
| TT-63-20415 | 212 |
| TT-63-20418 | 212 |
| TT-63-20419 | 212 |
| TT-63-20422 | 212 |
| TT-63-20423 | 213 |
| TT-63-20424 | 212 |
| TT-63-20425 | 212 |
| TT-63-20426 | 251 |
| TT-63-20427 | 251 |
| TT-63-20428 | 251 |
| TT-63-20430 | 223 |
| TT-63-20431 | 223 |
| TT-63-20434 | 219 |
| TT-63-20439 | 257 |
| TT-63-20440 | 257 |
| TT-63-20443 | 256 |
| TT-63-20446 | 219 |
| TT-63-20448 | 219 |
| TT-63-20449 | 259 |
| TT-63-20450 | 257 |
| TT-63-20455 | 220 |
| TT-63-20456 | 226 |
| TT-63-20457 | 242 |
| TT-63-20460 | 220 |
| TT-63-20461 | 225 |
| TT-63-20468 | 220 |
| TT-63-20470 | 224 |
| TT-63-20471 | 210 |
| TT-63-20481 | 213 |
| TT-63-20486 | 260 |
| TT-63-20503 | 220 |
| TT-63-20506 | 249 |
| TT-63-20507 | 259 |
| TT-63-20514 | 222 |
| TT-63-20515 | 238 |
| TT-63-20519 | 225 |
| TT-63-20523 | 221 |
| TT-63-20529 | 260 |
| TT-63-20533 | 220 |
| TT-63-20536 | 226 |
| TT-63-20541 | 246 |
| TT-63-20545 | 223 |
| TT-63-20546 | 223 |
| TT-63-20547 | 246 |
| TT-63-20558 | 236 |
| TT-63-20559 | 237 |
| TT-63-20568 | 230 |
| TT-63-20576 | 238 |
| TT-63-20579 | 242 |
| TT-63-20586 | 251 |
| TT-63-20611 | 221 |
| TT-63-20619 | 219 |
| TT-63-20620 | 231 |
| TT-63-20623 | 212 |
| TT-63-20624 | 213 |
| TT-63-20627 | 212 |
| TT-63-20635 | 263 |
| TT-63-20644 | 220 |
| TT-63-20648 | 226 |
| TT-63-20655 | 255 |
| TT-63-20657 | 223 |
| TT-63-20658 | 219 |
| TT-63-20663 | 247 |
| TT-63-20664 | 248 |
| TT-63-20665 | 247 |
| TT-63-20666 | 247 |
| TT-63-20667 | 248 |
| TT-63-20668 | 247 |
| TT-63-20669 | 248 |
| TT-63-20673 | 255 |
| TT-63-20679 | 249 |
| TT-63-20681 | 255 |
| TT-63-20683 | 219 |
| TT-63-20686 | 253 |
| TT-63-20692 | 253 |
| TT-63-20693 | 253 |
| TT-63-20698 | 254 |
| TT-63-20699 | 240 |
| TT-63-20700 | 220 |
| TT-63-20704 | 250 |
| TT-63-20705 | 250 |
| TT-63-20706 | 238 |
| TT-63-20707 | 225 |
| TT-63-20708 | 224 |
| TT-63-20709 | 224 |
| TT-63-20713 | 249 |
| TT-63-20715 | 231 |
| TT-63-20718 | 224 |
| TT-63-20719 | 231 |
| TT-63-20721 | 231 |
| TT-63-20723 | 264 |
| TT-63-20724 | 233 |
| TT-63-20725 | 221 |
| TT-63-20726 | 222 |
| TT-63-20727 | 254 |
| TT-63-20739 | 226 |
| TT-63-20741 | 220 |
| TT-63-20743 | 224 |
| TT-63-20744 | 224 |
| TT-63-20748 | 254 |
| TT-63-20750 | 222 |
| TT-63-20751 | 225 |
| TT-63-20753 | 222 |
| TT-63-20754 | 224 |
| TT-63-20757 | 223 |
| TT-63-20762 | 226 |
| TT-63-20766 | 225 |

| Number | Page |
|---|---|
| TT-63-20770 | 225 |
| TT-63-20771 | 223 |
| TT-63-20772 | 223 |
| TT-63-20774 | 225 |
| TT-63-20775 | 226 |
| TT-63-20777 | 221 |
| TT-63-20778 | 224 |
| TT-63-20780 | 225 |
| TT-63-20781 | 221 |
| TT-63-20788 | 246 |
| TT-63-20789 | 246 |
| TT-63-20794 | 223 |
| TT-63-20796 | 232 |
| TT-63-20797 | 218 |
| TT-63-20799 | 234 |
| TT-63-20800 | 232 |
| TT-63-20802 | 250 |
| TT-63-20806 | 250 |
| TT-63-20807 | 225 |
| TT-63-20808 | 227 |
| TT-63-20814 | 227 |
| TT-63-20821 | 223 |
| TT-63-20822 | 226 |
| TT-63-20823 | 253 |
| TT-63-20824 | 253 |
| TT-63-20827 | 253 |
| TT-63-20829 | 250 |
| TT-63-20830 | 259 |
| TT-63-20832 | 256 |
| TT-63-20833 | 257 |
| TT-63-20862 | 253 |
| TT-63-20901 | 208 |
| TT-63-20905 | 208 |
| TT-63-20980 | 251 |
| TT-63-20987 | 256 |
| TT-63-20988 | 261 |
| TT-63-22463(Tsidil'kovskii) | 264 |
| TT-63-22725(NRCC-C-4479) | 263 |
| TT-63-22728(NRCC-C-4483) | 241 |
| TT-63-22793(K-H-3485-b) | 219 |
| TT-63-22899(CLAIRA-T-1) | 249 |
| TT-63-22903(CLAIRA-T-5) | 249 |
| TT-63-22904(CLAIRA-T-6) | 249 |
| TT-63-22906(CLAIRA-T-8) | 248 |
| TT-63-22908(CLAIRA-T-10) | 249 |
| TT-63-22910(CLAIRA-T-12) | 248 |
| TT-63-22912(CLAIRA-T-14) | 249 |
| TT-63-22913(CLAIRA-T-15) | 248 |
| TT-63-22914(CLAIRA-T-16) | 246 |
| TT-63-22915(CLAIRA-T-17) | 194 |
| TT-63-22922(ATS-42Q72R) | 222 |
| TT-63-22926(ATS-23Q72R) | 238 |
| TT-63-22928(ATS-32Q72J) | 214 |
| TT-63-22940(ATS-12Q72FL) | 220 |
| TT-63-22942(ATS-57Q71F) | 263 |
| TT-63-22944(ATS-87Q71G) | 250 |
| TT-63-22959(ATS-08Q72G) | 252 |
| TT-63-22960(ATS-59Q72R) | 218 |
| TT-63-22964(ATS-74Q71R) | 252 |
| TT-63-22981(HB-6043) | 247 |
| TT-63-22991(HB-5815) | 258 |
| TT-63-23318(EURAEC-309) | 260 |
| TT-63-23345 | 217 |
| TT-63-23469 | 261 |
| TT-63-23944 | 240 |
| TT-63-24009 | 195 |
| TT-63-24010 | 195 |
| TT-63-24034 | 202 |
| TT-63-24065 | 240 |
| TT-63-24086 | 241 |
| TT-63-24090 | 246 |
| TT-63-24110 | 218 |
| TT-63-24145 | 229 |
| TT-63-24134 | 242 |
| TT-63-24151 | 255 |
| TT-63-24154 | 242 |
| TT-63-24175 | 250 |
| TT-63-24176 | 217 |
| TT-63-24177 | 242 |
| TT-63-24204 | 249 |
| TT-63-24225 | 250 |
| TT-63-24233 | 196 |
| TT-63-24239 | 196 |
| TT-63-24241 | 197 |
| TT-63-24245 | 255 |
| TT-63-24258 | 213 |
| TT-63-24261 | 246 |
| TT-63-24282 | 224 |
| TT-63-24303 | 250 |
| TT-63-24345 | 231 |
| TT-63-24349 | 233 |
| TT-63-24350 | 233 |
| TT-63-24351 | 234 |
| TT-63-24358 | 237 |
| TT-63-24359 | 242 |
| TT-63-24363 | 251 |
| TT-63-24432 | 230 |
| TT-63-24442 | 215 |
| TT-63-24448 | 215 |
| TT-63-24453 | 199 |
| TT-63-24477 | 210 |
| TT-63-24478 | 213 |
| TT-63-24491 | 202 |
| TT-63-24495 | 209 |
| TT-63-24500 | 215 |
| TT-63-24502 | 212 |
| TT-63-24511 | 213 |
| TT-63-24514 | 204 |
| TT-63-24515 | 209 |
| TT-63-24516 | 210 |
| TT-63-24599 | 260 |
| TT-63-24602 | 214 |
| TT-63-24616 | 234 |
| TT-63-31996 | 255 |
| TT-63-31997 | 204 |
| TT-63-41003 | 227 |
| TT-63-41003 (p. 1-13) | 196 |
| TT-63-41003 (p. 14-15) | 235 |
| TT-63-41003 (p. 16-26) | 229 |
| TT-63-41003 (p. 27-30) | 227 |
| TT-63-41003 (p. 31-43) | 227 |
| TT-63-41003 (p. 44-46) | 235 |
| TT-63-41003 (p. 47-51) | 229 |
| TT-63-41003 (p. 52-60) | 230 |
| TT-63-41003 (p. 61-65) | 235 |
| TT-63-41003 (p. 66-68) | 235 |
| TT-63-41012 | 228 |
| TT-63-41012 (p. 1-3) | 229 |
| TT-63-41012 (p. 4-6) | 234 |
| TT-63-41012 (p. 7-17) | 227 |
| TT-63-41012 (p. 18-24) | 228 |
| TT-63-41017 | 215 |
| TT-63-41035 | 265 |
| TT-63-41035 (p. 1-8) | 266 |
| TT-63-41035 (p. 9-15) | 216 |
| TT-63-41035 (p. 16-20) | 197 |
| TT-63-41035 (p. 21-24) | 193 |
| TT-63-41035 (p. 25-27) | 196 |
| TT-63-41035 (p. 28-29) | 239 |
| TT-63-41051 | 268 |
| TT-63-41051 (p. 1-6) | 234 |
| TT-63-41051 (p. 7-10) | 269 |
| TT-63-41051 (p. 11-12) | 239 |
| TT-63-41051 (p. 13-15) | 267 |
| TT-63-41051 (p. 16-20) | 268 |
| TT-63-41051 (p. 21-22) | 267 |
| TT-63-41051 (p. 23-28) | 267 |
| TT-63-41051 (p. 29-34) | 269 |
| TT-63-41051 (p. 35-40) | 267 |
| TT-63-41051 (p. 41-42) | 267 |
| TT-63-41051 (p. 43-47) | 267 |
| TT-63-41051 (p. 48-52) | 269 |
| TT-63-41051 (p. 53-55) | 267 |
| TT-63-41051 (p. 56-62) | 268 |
| TT-63-41051 (p. 63-67) | 268 |
| TT-63-41051 (p. 70-80) | 268 |
| TT-63-41051 (p. 84-85) | 268 |
| TT-63-41051 (p. 86-89) | 268 |
| TT-63-41051 (p. 90-98) | 269 |
| TT-63-41070 | 243 |
| TT-63-41070 (p. 1-3) | 251 |
| TT-63-41070 (p. 4-5) | 243 |
| TT-63-41070 (p. 6-8) | 244 |
| TT-63-41070 (p. 9-10) | 243 |
| TT-63-41070 (p. 22-23) | 243 |
| TT-63-41070 (p. 26-27) | 236 |
| TT-63-41083 | 270 |
| TT-63-41083 (p. 1-3) | 270 |
| TT-63-41083 (p. 4-9) | 270 |
| TT-63-41083 (p. 10-12) | 270 |
| TT-63-41083 (p. 13-29) | 270 |
| TT-63-41083 (p. 30-39) | 270 |
| TT-63-41083 (p. 40-50) | 270 |
| TT-63-41083 (p. 51-55) | 270 |
| TT-63-41083 (p. 56-58) | 270 |
| TT-63-41085 | 243 |
| TT-63-41085 (p. 1-16) | 246 |
| TT-63-41085 (p. 18) | 243 |
| TT-63-41086 | 254 |
| TT-63-41101 | 243 |
| TT-63-41105 | 212 |
| TT-63-41105 (p. 1-3) | 213 |
| TT-63-41105 (p. 4-5) | 212 |
| TT-63-41105 (p. 6-10) | 213 |
| TT-63-41115 | 244 |
| TT-63-41115 (p. 1-3) | 245 |
| TT-63-41115 (p. 4-6) | 245 |
| TT-63-41115 (p. 7-10) | 246 |
| TT-63-41115 (p. 11-12) | 245 |
| TT-63-41115 (p. 13-15) | 245 |
| TT-63-41115 (p. 16-17) | 244 |
| TT-63-41115 (p. 18-19) | 246 |
| TT-63-41115 (p. 20-21) | 244 |
| TT-63-41115 (p. 22) | 245 |
| TT-63-41125 | 265 |
| TT-63-41125 (p. 1-17) | 198 |
| TT-63-41125 (p. 18) | 198 |
| TT-63-41125 (p. 19-26) | 194 |
| TT-63-41125 (p. 27-34) | 199 |
| TT-63-41125 (p. 35-40) | 197 |
| TT-63-41125 (p. 41-50) | 216 |
| TT-63-41125 (p. 51-53) | 198 |
| TT-63-41125 (p. 54-62) | 228 |
| TT-63-41125 (p. 63-68) | 227 |
| TT-63-41125 (p. 69-71) | 261 |
| TT-63-41129 | 267 |
| TT-63-41129 (p. 3-6) | 268 |
| TT-63-41129 (p. 7-14) | 254 |
| TT-63-41129 (p. 15-16) | 254 |
| TT-63-41129 (p. 17-20) | 269 |
| TT-63-41129 (p. 21-27) | 269 |
| TT-63-41129 (p. 28-33) | 268 |
| TT-63-41129 (p. 34-39) | 269 |
| TT-63-41129 (p. 40-41) | 269 |
| TT-63-41129 (p. 42-44) | 254 |
| TT-63-41129 (p. 45-47) | 254 |
| TT-63-41129 (p. 48-50) | 254 |
| TT-63-41129 (p. 51-52) | 254 |
| TT-63-41130 | 209 |
| TT-63-41132 | 207 |
| TT-63-41136 | 211 |
| TT-63-41139 | 262 |
| TT-63-41139 (p. 1-74) | 261 |
| TT-63-41139 (p. 75-83) | 196 |
| TT-63-41139 (p. 84-107) | 265 |
| TT-63-41139 (p. 108-129) | 262 |
| TT-63-41139 (p. 130-145) | 262 |
| TT-63-41139 (p. 146-174) | 263 |
| TT-63-41139 (p. 175-189) | 264 |
| TT-63-41139 (p. 190-213) | 261 |
| TT-63-41139 (p. 214-239) | 261 |
| TT-63-41139 (p. 240-270) | 264 |
| TT-63-41139 (p. 271-294) | 264 |
| TT-63-41139 (p. 295-304) | 265 |
| TT-63-41139 (p. 305-323) | 265 |
| TT-63-41139 (p. 342-341) | 265 |
| TT-63-41139 (p. 342-357) | 264 |
| TT-63-41139 (p. 358-380) | 262 |
| TT-63-41139 (p. 381-391) | 262 |
| TT-63-41139 (p. 392-394) | 196 |
| TT-63-41139 (p. 395-402) | 240 |
| TT-63-41139 (p. 403-410) | 262 |
| TT-63-41139 (p. 411-415) | 262 |
| TT-63-41139 (p. 416-421) | 262 |
| TT-63-41139 (p. 422-428) | 261 |
| TT-63-41139 (p. 429-436) | 262 |
| TT-63-41139 (p. 437-445) | 265 |
| TT-63-41139 (p. 446-451) | 264 |
| TT-63-41139 (p. 452-458) | 262 |
| TT-63-41139 (p. 459-463) | 261 |
| TT-63-41141 | 257 |
| TT-63-41141 (p. 1-4) | 259 |
| TT-63-41141 (p. 5-9) | 258 |
| TT-63-41141 (p. 10-14) | 259 |
| TT-63-41141 (p. 15-17) | 258 |
| TT-63-41141 (p. 18-20) | 257 |
| TT-63-41141 (p. 31) | 257 |
| TT-63-41143 | 193 |
| TT-63-41144 | 266 |
| TT-63-41150 | 201 |
| TT-63-41161 | 257 |
| TT-63-41151 (p. 1-5) | 258 |
| TT-63-41161 (p. 6-18) | 259 |
| TT-63-41168 | 211 |
| TT-63-41169 | 244 |
| TT-63-41170 | 196 |
| TT-63-41170 (p. 1-4) | 202 |
| TT-63-41170 (p. 5-14) | 197 |
| TT-63-41171 | 200 |
| TT-63-41172 | 256 |
| TT-63-41173 | 266 |
| TT-63-41176 | 193 |
| TT-63-41177 | 194 |
| TT-63-41178 | 218 |
| TT-63-41183 | 265 |
| TT-63-41183 (p. 1-10) | 238 |
| TT-63-41183 (p. 12-16) | 218 |
| TT-63-41183 (p. 21-22) | 218 |
| TT-63-41183 (p. 23-25) | 200 |
| TT-63-41183 (p. 26) | 200 |
| TT-63-41183 (p. 27-30) | 201 |
| TT-63-41183 (p. 31) | 200 |
| TT-63-41183 (p. 32-33) | 238 |
| TT-63-41186 | 198 |
| TT-63-41187 | 230 |
| TT-63-41187 (p. 1-8) | 230 |
| TT-63-41187 (p. 9-14) | 231 |
| TT-63-41187 (p. 15-25) | 232 |
| TT-63-41187 (p. 26-33) | 232 |
| TT-63-41189 | 197 |
| TT-63-41191 | 196 |
| TT-63-41192 | 265 |
| TT-63-41192 (p. 1-3) | 194 |
| TT-63-41192 (p. 4-6) | 230 |
| TT-63-41192 (p. 7-8) | 230 |
| TT-63-41192 (p. 9-12) | 195 |
| TT-63-41192 (p. 13-15) | 193 |
| TT-63-41193 | 235 |
| TT-63-41194 | 263 |
| TT-63-41196 | 244 |
| TT-63-41196 (p. 1-4) | 246 |
| TT-63-41196 (p. 5-7) | 243 |
| TT-63-41196 (p. 8-12) | 245 |
| TT-63-41199 | 209 |
| TT-63-41206 | 203 |
| TT-63-41206 (p. 1-7) | 204 |
| TT-63-41206 (p. 8-10) | 208 |
| TT-63-41206 (p. 11) | 203 |
| TT-63-41206 (p. 12-14) | 204 |
| TT-63-41208 | 234 |
| TT-63-41213 | 204 |
| TT-63-41215 | 214 |
| TT-63-41220 | 216 |
| TT-63-41221 | 216 |
| TT-63-41222 | 216 |
| TT-63-41223 | 216 |
| TT-63-41224 | 198 |
| TT-63-41229 | 244 |
| TT-63-41229 (p. 1-22) | 243 |
| TT-63-41229 (p. 23-24) | 243 |
| TT-63-41229 (p. 25) | 245 |
| TT-63-41229 (p. 26) | 245 |
| TT-63-41232 | 230 |
| TT-63-41234 | 199 |
| TT-63-41235 | 235 |
| TT-63-41236 | 235 |
| TT-63-41236 (p. 1-25) | 235 |
| TT-63-41236 (p. 26-42) | 236 |
| TT-63-41236 (p. 43-69) | 236 |
| TT-63-41236 (p. 70-78) | 235 |
| TT-63-41236 (p. 79-99) | 235 |
| TT-63-41236 (p. 100-123) | 236 |
| TT-63-41236 (p. 124-147) | 235 |
| TT-63-41236 (p. 148-163) | 236 |
| TT-63-41236 (p. 164-178) | 236 |
| TT-63-41236 (p. 179-194) | 236 |
| TT-63-41236 (p. 195-205) | 235 |
| TT-63-41236 (p. 206-211) | 236 |
| TT-63-41236 (p. 212-215) | 236 |
| TT-63-41238 | 228 |
| TT-63-41238 (p. 1-10) | 229 |
| TT-63-41238 (p. 11-17) | 228 |
| TT-63-41238 (p. 18-26) | 229 |
| TT-63-41238 (p. 27-30) | 229 |
| TT-63-41238 (p. 31-40) | 228 |
| TT-63-41238 (p. 41-48) | 229 |
| TT-63-41238 (p. 49-51) | 235 |
| TT-63-41238 (p. 52-54) | 229 |
| TT-63-41238 (p. 55-71) | 227 |
| TT-63-41238 (p. 72-76) | 228 |
| TT-63-41239 | 215 |
| TT-63-41239 (p. 1-16) | 215 |
| TT-63-41239 (p. 17-26) | 214 |
| TT-63-41239 (p. 26-35) | 215 |
| TT-63-41239 (p. 36-48) | 214 |
| TT-63-41239 (p. 49-57) | 214 |
| TT-63-41239 (p. 58-67) | 215 |
| TT-63-41239 (p. 68-76) | 214 |
| TT-63-41239 (p. 77-83) | 214 |
| TT-63-41241 | 214 |
| TT-63-41241 (p. 1-12) | 215 |
| TT-63-41241 (p. 13-21) | 214 |
| TT-63-41241 (p. 22-23) | 214 |
| TT-63-41244 | 203 |
| TT-63-41244 (p. 1-3) | 203 |
| TT-63-41244 (p. 4-10) | 203 |

| Number | Page |
|---|---|
| TT-63-41244 (p. 11-14) | 204 |
| TT-63-41244 (p. 15-19) | 204 |
| TT-63-41245 | 244 |
| TT-63-41245 (p. 1-3) | 245 |
| TT-63-41245 (p. 4-6) | 245 |
| TT-63-41245 (p. 7-11) | 245 |
| TT-63-41245 (p. 12-16) | 245 |
| TT-63-41245 (p. 17-19) | 245 |
| TT-63-41247 | 238 |
| TT-63-41247 (p. 1-2) | 255 |
| TT-63-41247 (p. 4) | 234 |
| TT-63-41247 (p. 5) | 255 |
| TT-63-41247 (p. 6-10) | 257 |
| TT-63-41247 (p. 11-16) | 258 |
| TT-63-41247 (p. 17-23) | 257 |
| TT-63-41247 (p. 24-27) | 258 |
| TT-63-41247 (p. 33-35) | 256 |
| TT-63-41251 | 204 |
| TT-63-41252 | 230 |
| TT-63-41255 | 263 |
| TT-63-41255 (p. 1-6) | 263 |
| TT-63-41255 (p. 7-22) | 263 |
| TT-63-41255 (p. 23-37) | 264 |
| TT-63-41255 (p. 38-59) | 264 |
| TT-63-41255 (p. 60-84) | 264 |
| TT-63-41255 (p. 85-96) | 264 |
| TT-63-41259 | 203 |
| TT-63-41259 (p. 1-25) | 204 |
| TT-63-41259 (p. 26-29) | 203 |
| TT-63-41260 | 230 |
| TT-63-41262 | 236 |
| TT-63-41263 | 254 |
| TT-63-41271 | 201 |
| TT-63-41276 | 268 |
| TT-63-41276 (p. 1-3) | 269 |
| TT-63-41276 (p. 4-8) | 268 |
| TT-63-41276 (p. 9-10) | 267 |
| TT-63-41276 (p. 11-12) | 267 |
| TT-63-41276 (p. 13-17) | 269 |
| TT-63-41276 (p. 18-23) | 268 |
| TT-63-41276 (p. 24-25) | 269 |
| TT-63-41276 (p. 26-27) | 267 |
| TT-63-41276 (p. 28-29) | 268 |
| TT-63-41276 (p. 30-34) | 269 |
| TT-63-41276 (p. 35-39) | 267 |
| TT-63-41276 (p. 40-47) | 269 |
| TT-63-41277 | 215 |
| TT-63-41284 | 247 |
| TT-63-41284 (p. 1-5) | 248 |
| TT-63-41284 (p. 6-7) | 248 |
| TT-63-41284 (p. 8) | 247 |
| TT-63-41284 (p. 9) | 247 |
| TT-63-41284 (p. 11) | 247 |
| TT-63-41284 (p. 13-14) | 248 |
| TT-63-41284 (p. 15-19) | 248 |
| TT-63-41289 | 239 |
| TT-63-41289 (p. 1-27) | 241 |
| TT-63-41289 (p. 28-47) | 265 |
| TT-63-41289 (p. 48-74) | 241 |
| TT-63-41289 (p. 75-97) | 241 |
| TT-63-41289 (p. 98-113) | 239 |
| TT-63-41289 (p. 114-127) | 240 |
| TT-63-41289 (p. 128-143) | 240 |
| TT-63-41289 (p. 144-154) | 241 |
| TT-63-41289 (p. 155-164) | 241 |
| TT-63-41289 (p. 165-176) | 242 |
| TT-63-41289 (p. 177-201) | 242 |
| TT-63-41289 (p. 202-206) | 241 |
| TT-63-41289 (p. 207-211) | 240 |
| TT-63-41289 (p. 212-223) | 240 |
| TT-63-41289 (p. 224-233) | 240 |
| TT-63-41289 (p. 234-240) | 241 |
| TT-63-41289 (p. 241-246) | 240 |
| TT-63-41289 (p. 247-251) | 240 |
| TT-63-41289 (p. 252-259) | 242 |
| TT-63-41289 (p. 260-269) | 241 |
| TT-63-41289 (p. 270-274) | 239 |
| TT-63-41290 | 207 |
| TT-63-41294 | 207 |
| TT-63-41294 (p. 1-11) | 210 |
| TT-63-41294 (p. 12-23) | 209 |
| TT-63-41294 (p. 24-38) | 209 |
| TT-63-41294 (p. 39-47) | 210 |
| TT-63-41294 (p. 48-57) | 210 |
| TT-63-41294 (p. 58-70) | 210 |
| TT-63-41294 (p. 71-80) | 207 |
| TT-63-41294 (p. 81-94) | 209 |
| TT-63-41294 (p. 95-103) | 208 |
| TT-63-41294 (p. 104-110) | 209 |
| TT-63-41294 (p. 111-118) | 208 |
| TT-63-41294 (p. 119-127) | 208 |
| TT-63-41294 (p. 128-135) | 211 |
| TT-63-41294 (p. 136-145) | 205 |
| TT-63-41294 (p. 146-152) | 203 |
| TT-63-41295 | 237 |
| TT-63-41297 | 255 |
| TT-63-41303 | 218 |
| TT-63-41310 | 244 |
| TT-63-41310 (p. 1-4) | 245 |
| TT-63-41310 (p. 5-8) | 237 |
| TT-63-41313 | 207 |
| TT-63-41313 (p. 1-2) | 213 |
| TT-63-41313 (p. 3-10) | 209 |
| TT-63-41313 (p. 11-15) | 208 |
| TT-63-41313 (p. 16-136) | 209 |
| TT-63-41324 | 237 |
| TT-63-41324 (p. 8-12) | 238 |
| TT-63-41324 (p. 13-33) | 237 |
| TT-63-41324 (p. 37-41) | 238 |
| TT-63-41324 (p. 45-49) | 238 |
| TT-63-41324 (p. 62-70) | 237 |
| TT-63-41324 (p. 71-74) | 238 |
| TT-63-41324 (p. 75-76) | 238 |
| TT-63-41325 | 194 |
| TT-63-41325 (p. 1-10) | 194 |
| TT-63-41325 (p. 11-21) | 194 |
| TT-63-41325 (p. 22-25) | 194 |
| TT-63-41327 | 270 |
| TT-63-41327 (p. 1-8) | 270 |
| TT-63-41327 (p. 9-12) | 270 |
| TT-63-41327 (p. 13-15) | 269 |
| TT-63-41327 (p. 17-24) | 270 |
| TT-63-41330 | 198 |
| TT-63-41330 (p. 1-4) | 199 |
| TT-63-41330 (p. 5-6) | 198 |
| TT-63-41330 (p. 7-18) | 198 |
| TT-63-41330 (p. 19-26) | 199 |
| TT-63-41331 | 259 |
| TT-63-41334 | 257 |
| TT-63-41336 | 216 |
| TT-63-41336 (p. 1-11) | 217 |
| TT-63-41336 (p. 12-22/23) | 217 |
| TT-63-41336 (p. 24-52) | 216 |
| TT-63-41336 (p. 53-60) | 217 |
| TT-63-41336 (p. 61-71) | 217 |
| TT-63-41336 (p. 72-76) | 216 |
| TT-63-41336 (p. 77-81) | 217 |
| TT-63-41343 | 207 |
| TT-63-41343 (p. 1-10) | 209 |
| TT-63-41343 (p. 11-12) | 211 |
| TT-63-41343 (p. 13-21) | 208 |
| TT-63-41343 (p. 22-33) | 210 |
| TT-63-41343 (p. 34-43) | 211 |
| TT-63-41343 (p. 44-52) | 208 |
| TT-63-41343 (p. 53-61) | 207 |
| TT-63-41344 | 247 |
| TT-63-41344 (p. 1-5) | 248 |
| TT-63-41344 (p. 11-12) | 247 |
| TT-63-41344 (p. 13-15) | 247 |
| TT-63-41344 (p. 20-21) | 248 |
| TT-63-41345 | 266 |
| TT-63-41345 (p. 1-11) | 197 |
| TT-63-41345 (p. 12-20) | 197 |
| TT-63-41345 (p. 21-26) | 266 |
| TT-63-41345 (p. 27-28) | 266 |
| TT-63-41345 (p. 29-40) | 195 |
| TT-63-41345 (p. 41-43) | 215 |
| TT-63-41345 (p. 44-47) | 266 |
| TT-64-10023 | 197 |
| TT-64-10041 | 197 |
| TT-64-10042 | 264 |
| TT-64-10043 | 197 |
| TT-64-10049 | 197 |
| TT-64-10050 | 221 |
| TT-64-10067 | 224 |
| TT-64-10110 | 226 |
| TT-64-10114 | 222 |
| TT-64-10131 | 219 |
| TT-64-12010(BISI-3413) | 258 |
| TT-64-12014(BISI-2693) | 259 |
| TT-64-12024(BISI-3269) | 239 |
| TT-64-12031(NRCC-C-4555) | 242 |
| TT-64-12035(Volkenshtein) | 226 |
| TT-64-12036(Elmer) | 249 |
| TT-64-12037(Gutenmakher) | 254 |
| TT-64-12041(CTS(Chem)-349) | 224 |
| TT-64-12043(CTS(Chem)-350) | 253 |
| TT-64-12050(ATS-49Q72R) | 218 |
| TT-64-12053(ATS-00Q73R) | 260 |
| TT-64-12059(ATS-74Q72R) | 251 |
| TT-64-12069(ATS-89Q72R) | 251 |
| TT-64-12070(ATS-01Q73R) | 234 |
| TT-64-12071(ATS-95Q72R) | 240 |
| TT-64-12080(ATS-65Q72G) | 252 |
| TT-64-12082(ATS-86Q72F) | 256 |
| TT-64-12083(ATS-96Q72G) | 255 |
| TT-64-12084(ATS-52P60J) | 252 |
| TT-64-12121(Fersman) | 231 |
| TT-64-12122(ATS-1060-GJ) | 232 |
| TT-64-12123(ATS-1064-FJ) | 232 |
| TT-64-12124(Signeur) | 219 |
| TT-64-12125(Grant) | 197 |
| TT-64-12126(Standen) | 218 |
| TT-64-12127(Popov) | 233 |
| TT-64-12128(Fromherz) | 218 |
| TT-64-12129(Callaham) | 218 |
| TT-64-12130(Kuck) | 219 |
| TT-64-12131(ATS-1120-GJ) | 234 |
| TT-64-12132 (INTERNATIONAL) | 218 |
| TT-64-12135(HB-6128) | 256 |
| TT-64-12139(HB-6117) | 259 |
| TT-64-12141(HB 6031) | 259 |
| TT-64-12144(HB-5926) | 256 |
| TT-64-12152(HB-6071) | 256 |
| TT-64-12155(HB-6086) | 257 |
| TT-64-12158(HB-5801) | 258 |
| TT-64-12167(HB-5858) | 258 |
| TT-64-12170(HB-5020) | 258 |
| TT-64-12171(HB-5351) | 250 |
| TT-64-12173(HB-5160) | 256 |
| TT-64-12174(Chevassus) | 252 |
| TT-64-12193(ATS-51Q73R) | 256 |
| TT-64-12198(ATS-68Q72J) | 252 |
| TT-64-12201(ATS-50Q73R) | 252 |
| TT-64-12202(ATS-67Q72J) | 252 |
| TT-64-12204(ATS-26Q73J) | 252 |
| TT-64-12207(ATS-34Q73R) | 219 |
| TT-64-12212(ATS-17Q73R) | 231 |
| TT-64-12223(ATS-84Q73G) | 241 |
| TT-64-13058 | 232 |
| TT-64-13101 | 198 |
| TT-64-13103 | 197 |
| TT-64-13103 (p. 1-5) | 199 |
| TT-64-13103 (p. 6-12) | 198 |
| TT-64-13103 (p. 13-19) | 198 |
| TT-64-13103 (p. 20-28) | 198 |
| TT-64-21002 | 260 |
| TT-64-21020 | 259 |
| TT-64-21029 | 237 |
| TT-64-21029 (p. 1-2) | 251 |
| TT-64-21029 (p. 6) | 193 |
| TT-64-21039 | 260 |
| TT-64-21042 | 244 |
| TT-64-21042 (p. 1-2) | 243 |
| TT-64-21042 (p. 3-4) | 237 |
| TT-64-21042 (p. 14) | 203 |
| TT-64-21042 (p. 24) | 212 |
| TT-64-21042 (p. 32-33) | 239 |
| TT-64-21042 (p. 42-44) | 239 |
| TT-64-21042 (p. 72-75) | 242 |
| TT-64-21043 | 218 |
| TT-64-21049 | 247 |
| TT-64-21050 | 266 |
| TT-64-21050 (p. 1-8) | 266 |
| TT-64-21050 (p. 9-12) | 266 |
| TT-64-21050 (p. 13-19) | 234 |
| TT-64-21050 (p. 20-22) | 261 |
| TT-64-21050 (p. 23-25) | 263 |
| TT-64-21050 (p. 26-32) | 194 |
| TT-64-21050 (p. 33-34) | 263 |
| TT-64-21050 (p. 35-36) | 246 |
| TT-64-21050 (p. 37-38) | 236 |
| TT-64-21050 (p. 39-40) | 266 |
| TT-64-21050 (p. 41-42) | 265 |
| TT-64-21050 (p. 43-44) | 266 |
| TT-64-21065 | 237 |
| TT-64-21065 (p. 1-8) | 237 |
| TT-64-21065 (p. 9-10) | 237 |
| TT-64-21066 | 244 |
| TT-64-21066 (p. 4-7) | 251 |
| TT-64-21066 (p. 8-11) | 260 |
| TT-64-21066 (p. 12) | 251 |
| TT-64-21066 (p. 25-33) | 240 |
| TT-64-21067 | 261 |
| TT-64-21070 | 227 |
| TT-64-21070 (p. 1-2) | 227 |
| TT-64-21070 (p. 3-5) | 227 |
| TT-64-21070 (p. 6-9) | 227 |
| TT-64-21070 (p. 10-11) | 227 |
| TT-64-21080 | 239 |
| TT-64-21080 (p. 35-36) | 239 |
| TT-64-21080 (p. 56-58) | 239 |
| TT-64-21080 (p. 84-91) | 240 |
| TT-64-21080 (p. 112-113) | 256 |
| TT-64-21080 (p. 114-115) | 256 |
| TT-64-21080 (p. 116-117) | 255 |
| TT-64-21080 (p. 118-119) | 256 |
| TVA-3984 | 224 |
| WB/T-101 | 228 |

Page
256
252
256
252
252
252
252
219
231
241
232
198
197
199
198
198
260
259
237
251
193
260
244
243
237
203
212
239
239
242
218
247
266
266
266
234
261
263
194
263
246
236
266
265
266
237
237
237
244
251
260
251
240
261
227
227
227
227
227
239
239
239
240
256
256
255
256
224
228

# U.S. DEPARTMENT OF COMMERCE FIELD OFFICES

## SERVE THE BUSINESS COMMUNITY

The Department of Commerce maintains Field Offices to enable the business community to avail itself locally of Government facilities designed to promote commerce. Working closely with various units in the Department and, when necessary, with other Government agencies, the Field Offices provide business services to manufacturers, wholesalers, retailers, trade publications, trade associations, advertising agencies, research groups, financial institutions, and exporters and importers.

Experienced personnel will gladly assist in the solution of specific problems, explain the scope and meaning of regulations administered by the Department, and provide practical assistance in the broad field of domestic and foreign commerce. Field Offices act as official sales agents of the Superintendent of Documents, and maintain an extensive business reference library containing periodicals, directories, publications and reports from official as well as private sources.

Among the many services which businessmen have found of value are:

### GENERAL

- Management and business aids
- Establishing a new business

### BASIC ECONOMIC DATA

- Census data with national and often State and regional breakdowns, on manufacturing wholesaling, retailing, service industries, employment and unemployment, population, housing, agriculture
- Basic records of national income and product, regional trends, balance of payments, foreign aid

### MARKETING AND DISTRIBUTION

- Development and maintenance of markets
- Distribution channels, facilities and services
- Marketing and distribution statistics

### PRODUCTION

- Modernization of plant processes and other technological aids
- Development of new products
- Government-owned patents for free license
- Commodity standards

### FOREIGN TRADE AND INVESTMENT

- Tariff and exchange regulations
- Import and export quotas, licensing regulations
- Statistics on imports and exports
- Investment and trade opportunities abroad
- Economic conditions in foreign countries

## COOPERATIVE OFFICES

To make the services of the Department of Commerce more widely available, agreements have been entered into with more than 750 Chambers of Commerce, Manufacturers Associations, and similar business groups under which these organizations have become official Cooperative Offices of the Department. If specific information is not on hand in the Cooperative Office, your problem will be referred to the nearest Departmental field office.

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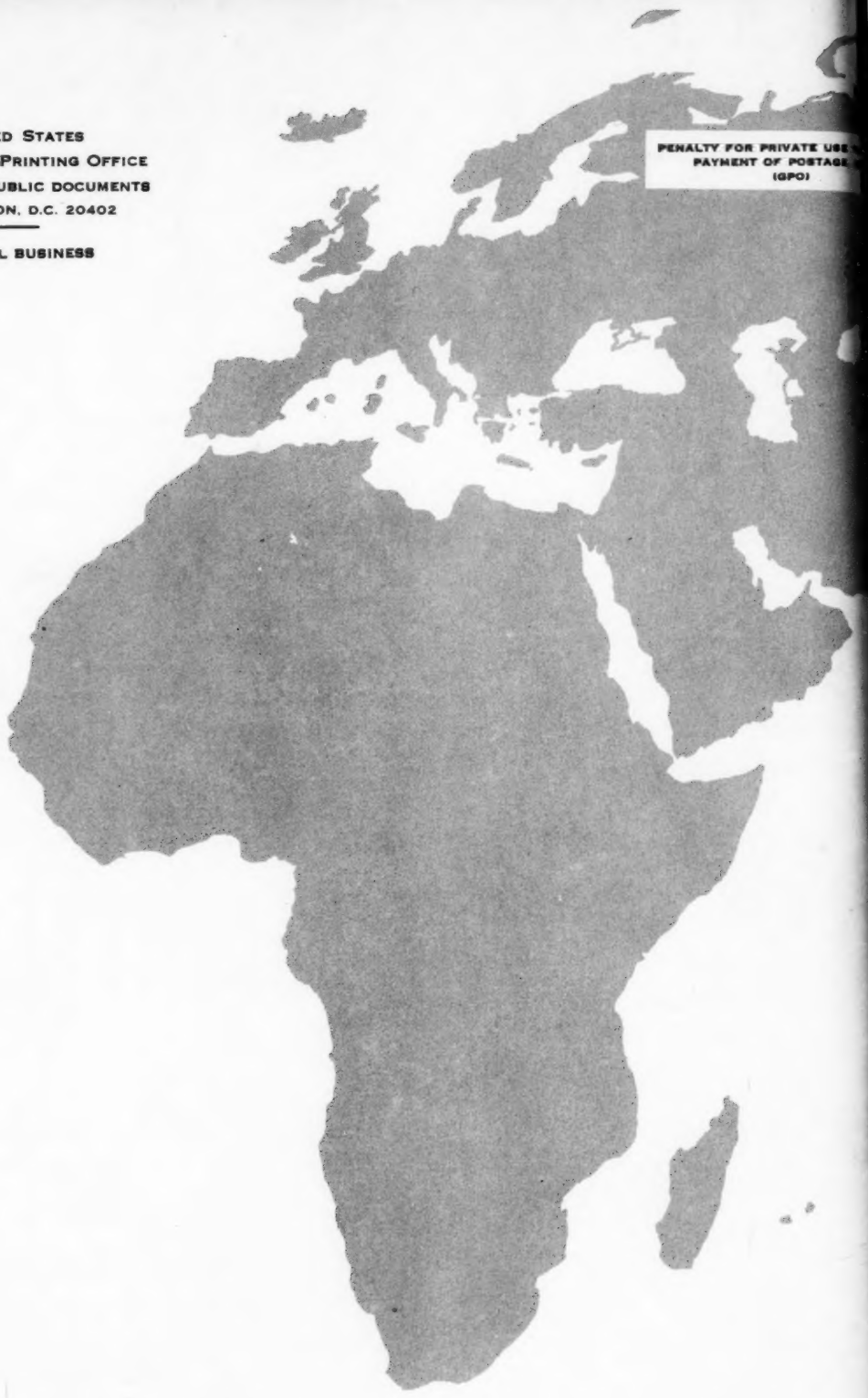
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